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ABSTRACT

Widespread concern about teenage childbearing led to the establishment of numerous intervention programs throughout the United States during the 1980s. Nevertheless, between the mid-1980s and the early 1990s, the teen birth rate rose in every state. This volume examines numerous prevention programs and makes recommendations for establishing effective preventative measures. Research shows that no remarkably successful program stands out in reducing adolescent childbearing. Unfortunately, aside from a few well-designed, well-implemented, and well-evaluated studies, most of the program that have been implemented have been small, ad hoc, and poorly designed short-term projects. To identify strategies that will affect levels of adolescent sexual activity, contraceptive use, and pregnancy, it will be necessary to mount a coherent set of evaluation studies based on theory and existing research, using rigorous experimental methods. There is a need to develop broader programs that not only focus on poverty, school failure, and family problems, but also develop family strengths. Three appendices, which make up the bulk of the document, are: (1) Programs/Interventions by Evaluation Approach; (2) Power Analyses, which describes a statistical measure of a program's effect; and (3) Pregnancy Prevention Programs and Evaluations: Detailed Descriptions. Contains a 300-item bibliography. (RJM)

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Adolescent Pregnancy Prevention Programs: Interventions and Evaluations

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ADOLESCENT PREGNANCY PREVENTION PROGRAMS:
INTERVENTIONS AND EVALUATIONS

EXECUTIVE SUMMARY

Introduction

Widespread concern about the incidence of teenage childbearing led to the establishment of numerous intervention programs throughout the United States during the 1980s. Despite the varied initiatives and often quite creative interventions that were implemented during this decade, the teen birth rate (births per 1,000 females aged 15-19) rose between the mid-1980s and the early 1990s in every state. The magnitude of the increase in the birth rate varied across states; but overall the birth rate rose by one-quarter between 1986 and 1991. Between 1991 and 1992, this increase was arrested and a tiny decline occurred; however, the teen birth rate was still 22 percent higher in 1992 than it was in 1986. Moreover, the teen birth rate in the United States continues to range between two and seven times higher than the teen birth rate in comparable Western industrialized nations.

Policy makers, program providers and tax payers all seek to identify strategies to lower the rate of teenage childbearing in the United States. It is generally recognized that most families address the needs of their developing adolescents without requiring assistance from formal or organized programs. However, some families want or need assistance from programs. Such programs seek to prevent or delay sexual initiation, to increase the consistent use of effective contraception, and less often, to affect pregnancy resolution decisions among adolescents who experience pregnancy. Some programs seek more generally to enhance the educational or occupational prospects of adolescents, to provide particularly disadvantaged teens a reason to postpone sexual activity, pregnancy, and parenthood. There is, of course, strong interest in immediately identifying interventions that have large and sustained effects in reducing adolescent childbearing. Unfortunately, no remarkably successful programs stand out. Only a handful of well-designed and well-evaluated programs have been implemented. Although they do not provide evidence of substantial impacts, these flagship projects provide the basis on which further initiatives can be built.

Regrettably, aside from a few well-designed, well-implemented, and well-evaluated studies, most of the programs that have been implemented to affect teenage childbearing have been small, *ad hoc*, and poorly designed short-term projects lacking a useful evaluation strategy. There is a need for a new generation of interventions that are implemented with careful theoretical and conceptual planning and with rigorous evaluations.

Summary of Review Findings

What we do know from adolescent pregnancy prevention programs to date can be succinctly summarized. Numerous programs have been implemented, ranging from abstinence education to comprehensive, multi-faceted interventions that offer education, counseling, and a variety of support services. Studies have concluded that the provision of sex education to adolescents does not increase the likelihood of initiating sexual activity. However, abstinence-only prevention programs have not been shown to reduce sexual activity either. Studies indicate that sex education, as generally offered in schools, increases knowledge in the short-term, but has minimal effects on whether teens initiate sex or use contraception. On the other hand, theory-based sex education combined with skill-building activities demonstrates somewhat stronger and more sustained impacts. Specifically, the sex education programs with measurable impacts are those that include the following: a specific and focussed message to delay sexual activity; the provision of contraceptive information; and activities concerned with peer and media influences, modeling, communication, and negotiation. Program that include theses components have been found to result in a slight delay in sexual initiation and have moderate effects in improving contraceptive behavior.

Family planning services also have been found to reduce unwanted births, primarily because contraceptive services help sexually active persons prevent pregnancy, but perhaps also due to increased access to abortion. Services that reduce barriers to obtaining reproductive care among adolescents are more likely to affect contraceptive use than traditional service delivery approaches. School-based clinics are a source of health care, but have not been found to consistently reduce sexual activity or pregnancy among teens, with the exception of the *Self Center* clinic in Baltimore. The *Self Center* used a case-management approach to link school sex education with contraceptive and other support services at a nearby health facility. Other examples of promising initiatives include *Teen Outreach*, a program for adolescent girls that combines a special curriculum with volunteer work and has been linked to lower pregnancy rates. Programs providing comprehensive services to teen mothers have not been found to delay second pregnancies. However, the enriched pre-school development provided in the *Perry Pre-School* program has been found to be related to a lower incidence of teenage childbearing more than a decade later.

Conclusions

Several broad conclusions can be drawn about the current state of the art of pregnancy prevention programs. First, interventions have generally not been informed by basic research studies that have been conducted during the last several decades, or by theory, and this accounts in part for the haphazard, incomplete state of current knowledge regarding the success of interventions intended to affect adolescent sexual behavior and pregnancy. Second, most of the evaluations that have been conducted have been lacking in methodological and statistical rigor. To identify strategies that will have substantial impacts on levels of adolescent sexual activity, contraceptive use, and pregnancy, it will be necessary to mount a coherent set of evaluation studies, based on theory and existing research, using rigorous experimental methods.

A review of the existing body of basic research on adolescent sexual and fertility behavior indicates that the primary factors that are associated with early sexual initiation, ineffective contraception, and teenage parenthood are socioeconomic disadvantage; school failure; and risk-taking behaviors. More nebulous, but also important, are a set of family strengths including nurturance and love, monitoring and discipline, clear values and authoritative communication which instill in children and adolescents the will and capacity to postpone parenthood until they can form strong and stable families. The role of the media is discussed but under-researched.

Despite the research knowledge indicating the multiple and complex factors leading to teen pregnancy, interventions mounted to prevent adolescent parenthood only rarely focus on any or all of these varied risk factors. More generally, interventions provide information about reproduction and sometimes offer contraceptive services. Sex education and contraceptive services have an important role to play in the prevention of adolescent pregnancy, and several well-implemented and evaluated approaches show moderate, but real effects, for example, *Postponing Sexual Involvement* and *Reducing the Risk*. However, it is clear from the modest to nil success of most programs to date, that these approaches alone are insufficient to produce substantial impacts on teenage childbearing, particularly for adolescents who are most at risk. There is a need to develop broader programs that focus on poverty, school failure, and behavior problems, and that develop family strengths and parenting skills -- the factors found to predict adolescent childbearing -- as well as those that provide information about reproduction and contraceptive services. There are numerous interesting and creative programs being implemented across the United States. However, these programs have generally evolved based upon good intentions, common sense, local mythologies, available resources, and the energies of interested staff persons. Sometimes these ideas are documented to work; more often they do not have measurable impacts, or it is unclear whether they are effective and for whom their impact is greatest. There is an overwhelming need for an organized research and intervention agenda that builds on existing knowledge and theory.

Ironically, one of the few programs found to reduce teen childbearing is the *Perry Pre-School*. This program provides high-quality educational enrichment for disadvantaged pre-school children and emphasizes parental involvement, but not explicitly intended to later affect the probability of teen pregnancy among the participant children. It merits noting that this early enrichment among at-risk children appears to be more effective than sex education lectures. Unfortunately, youth development approaches have been relatively ignored in the hope that disadvantaged adolescents can be cajoled into delaying sex or using contraceptives, although their current lives and bleak futures provide them little reason to postpone parenthood. The most promising approaches to preventing pregnancy based on the scientific literature are to strengthen families and provide educational enrichment and economic opportunities to children and adolescents.

Strong interventions require equally strong evaluations to document their effects. Experimental evaluations are needed to assess impacts and to identify the components of programs that are responsible for any impacts that are documented. Although experimental evaluation designs are best, quasi-experimental studies can provide useful evidence, if their comparison groups are carefully and thoughtfully selected. In addition, using more than one comparison strategy can increase confidence in any effects that are found. Micro-level analyses of individuals using survey data and macro-level studies of state, city, or county areas can provide non-causal indications of an association or the lack of an association between policies or contextual factors and the incidence of teen childbearing. Qualitative studies can suggest hypotheses and fine-tune questions and methodologies. However, only rigorously-executed experimental studies can aspire to address questions of causal impact.

Unfortunately, most of the evaluation studies conducted to date, even those published in peer-reviewed journals, are methodologically inadequate. It would be more fruitful to do fewer studies, but to evaluate them more rigorously. The existence of several excellent long-term evaluations demonstrates that it is possible to conduct rigorous evaluation research on programs designed to delay sex and postpone pregnancy. Such projects can be immediately implemented, while a longer range service delivery and funding strategy is being developed. However, long-term funding of approaches that cannot demonstrate impacts is inappropriate. Rather, such funding should be reserved for those initiatives that are strongly grounded in theoretical research, propose an intervention strategy consistent with the underlying theory, and employ a solid, rigorous evaluation.

Finally, it is necessary to mount an organized program of research in which interventions designed on the basis of previous research and theory, as well as field experience and policy interest, are evaluated with rigorous methods. The questions to be examined would be addressed systematically and sequentially. Each evaluation would build on the knowledge gained in the previous evaluation. Medical advances are fostered in this manner, and it is necessary for the policy and social sciences to become more systematic in their search for effective prevention programs.

There is a substantial body of credible scientific evidence that suggests that delaying childbearing into the twenties is a reasonable public policy goal. Scientific research can contribute to reaching this goal, if policy makers and funders insist on thoughtfully-designed interventions with rigorous evaluations.

I. ADOLESCENT PREGNANCY PREVENTION PROGRAMS: INTERVENTIONS AND EVALUATIONS

Introduction

After World War II, during the "baby boom" years, U.S. birth rates rose markedly in all age groups, declining again substantially in the 1970s in all age groups. The birth rate among U.S. teens followed this general trend, peaking in 1957 at 96 births per 1,000 females aged 15-19, declining rapidly during the 1970s, and then staying at a plateau through the mid-1980s at over 50 births per 1,000 females aged 15-19, a level far higher than that found in comparable industrialized nations. The teen birth rates from 1950 to 1992 are shown in Figure 1 by age group. Given widespread interest in further lowering the incidence of teenage childbearing in the United States, it was a source of chagrin and frustration when the U.S. teen birth rate not only failed to fall further but actually began to rise in the late 1980s. In fact, the teen birth rate rose between the mid-1980s and the early 1990s in every state. While the magnitude of the increase in the birth rate varied across states, overall the rate of births per 1,000 females aged 15-19 rose from 50 in 1986 to 62 in 1991, a one-quarter increase in just five years (Moore and Snyder, 1994). Between 1991 and 1992, this increase was arrested and a tiny decline in the teen birth rate occurred, from 62 to 61. However, the teen birth rate was still 22 percent higher in 1992 than it was in 1986. Moreover, the proportion of teen births occurring outside of marriage has increased steadily, rising from 15 percent in 1960 to 71 percent in 1992. In addition, the teen birth rate in the United States continued to be much higher than the teen birth rate in comparable Western industrialized nations (Moore, Snyder, and Glei, 1995). For example, in 1992 the birth rate was 6 in the Netherlands, 23 in Austria, 17 in Norway, 33 in Great

Britain, 13 in Sweden, and nine in Denmark, compared to 61 in the United States.

Widespread concern about the incidence of teenage childbearing has led to the establishment of numerous intervention programs throughout the United States. Some programs have worked with families. More often, programs focus on female adolescents. Adolescent males and the older males who frequently are the fathers of babies born to teens are less often the focus of program efforts. There is strong interest in immediately identifying those ongoing interventions that have large and sustained effects in delaying adolescent childbearing. Unfortunately, no programs have as yet been identified that have been documented to produce large and long-lasting impacts on the incidence of adolescent pregnancy. In fact, only a small number of programs have been identified to date that are thoughtfully conceptualized, carefully implemented, and rigorously evaluated. Although they do not provide evidence of substantial or long-term impacts, these flagship projects provide the basis on which further initiatives can be built.

Regrettably, aside from this handful of well-designed, well-implemented, and well-evaluated studies, most of the programs that have been implemented to affect teenage childbearing have been small, unsystematic, and poorly designed short-term projects lacking a useful evaluation strategy. There is a need for a new generation of interventions that are implemented with careful theoretical and conceptual planning and with rigorous evaluations.

The process of becoming a teenage parent involves a sequence of decisions and transitions regarding sexual intercourse, contraceptive use, abortion, marriage, and adoption. The flow chart shown in Figure 2 presents these transitions graphically. Interventions can be implemented at any or all of these stages. That is, policy makers, program providers, and parents may seek to delay the initiation of sexual activity, encourage adolescents who have had sex to delay further sex, or encourage them to reduce their frequency of sex or the number of partners they have. Alternatively, interventions may focus on improving contraceptive use among sexually active adolescents, to affect decisions about pregnancy resolution among teenagers who become pregnant, and/or to delay the occurrence of subsequent births (Miller, Card, Paikoff, and Peterson, 1992; Hayes, 1987; Moore and Burt, 1982). We discuss interventions implemented at all of these stages. We do not address interventions directed at improving pregnancy outcomes or parenting among teens who become parents, as the focus of our review is on the prevention of adolescent parenthood, particularly on interventions that prevent pregnancy.

In addition, we do not provide a full discussion of Human Immunodeficiency Virus (HIV) or sexually transmitted disease (STD) prevention programs, both of which may have an indirect effect on preventing adolescent pregnancy. The rationale for limiting our discussion to pregnancy prevention programs is twofold. First, while there are many initiatives targeting adolescents and high risk behavior to reduce the risk of young people's exposure to HIV and STDs, few of these programs specifically include pregnancy prevention as a program goal, although most acknowledge the far reaching benefits of reducing high risk sexual behavior among teens. Second, the literature on HIV and STD prevention programs is becoming almost as extensive as the literature on pregnancy prevention programs. To conduct a full examination of both of these types of initiatives falls outside the specific charge of this review. However, during our review of the pregnancy prevention programs, a modest number of initiatives that employ a combined focus of HIV/STD and pregnancy prevention were identified. These programs are duly noted and discussed in Chapter II of this report.

The first goal of this review is to identify the range of programs under way in the United

States. In searching for creative and innovative programs, we have cast a wide net. In order to obtain the broadest set of innovative ideas, we have not eliminated any programs on the basis of sample size, research design, or approach. Hence, we describe some very small and even *ad hoc* initiatives, as well as a number of large and well-established interventions. Some of these programs are described as exemplars of creativity, perseverance, and occasionally of methodology, and we chronicle their accomplishments. More often, however, our focus will be on weaknesses in design and evaluation, in order to illuminate the reasons that underlie our current shortfall in solid information regarding interventions. We summarize the varied programs we were able to identify in Appendix C of this document.

Our second and very critical goal is to identify what works. Which programs can demonstrate an impact on adolescent sexual, contraceptive or pregnancy resolution behavior? To address this question, we review articles and reports that describe and evaluate varied programs, and both summarize their findings and provide a critique of their methods. Regrettably, many programs have not been evaluated or suffer from poorly-designed or poorly-implemented evaluations, leaving major gaps in our capacity to recommend effective programs and approaches.

Acknowledging the weakness of our current knowledge base, we progress to our third goal: to describe a set of intervention and evaluation strategies that might be implemented during the coming decade, and to provide policy makers, program providers and researchers with a sense of the strengths and weaknesses of available evaluation strategies. Our fourth goal is to suggest a number of intervention and evaluation strategies, based on research studies of adolescent fertility, that might be implemented. Therefore, in Chapter III, we outline a number of evaluation research strategies and suggest a variety of interventions that might be implemented and assessed using these evaluation techniques. We very intentionally first describe each evaluation strategy and only then, following the discussion of each evaluation design, do we suggest a number of substantive initiatives that might be implemented and evaluated. We embed these substantive suggestions within a discussion of research strategies in the hope that program designers will recognize the importance of combining a strong program design with a strong research design. In particular, we emphasize the need for experimental and high quality quasi-experimental studies.

The ultimate goal of this report is to encourage funders, program designers, and researchers who conduct evaluation studies to work together to build a knowledge base that will inform policy decisions made at the close of the century.

II. ALTERNATIVE APPROACHES TO ADOLESCENT PREGNANCY PREVENTION PROGRAMS AND THEIR MEASURED IMPACTS

Introduction

This chapter provides an overview of interventions designed to affect the occurrence or timing of the behaviors that lead to an adolescent birth, including the transition to first sex; the consistent use of contraception; and decisions regarding pregnancy resolution, including choices about adoption, abortion, and marriage. A discussion of programs implemented to delay subsequent pregnancies and births among young mothers is also included. Our review describes the approaches used in each intervention, the evaluation strategy employed (if an evaluation has been conducted), and reports the impact, if any, of the intervention on teen sexual activity, contraceptive use, pregnancy and/or childbearing. Where appropriate and feasible, we highlight key or unique elements of the program that may be particularly important in affecting behavior change. With the exception of a handful of interventions, we caution that the majority of programs do not operate within a specific theoretical framework and do not employ a rigorous evaluation design; most interventions are short-term, target a small number of teens, and demonstrate small, if any, impacts on teenage sexual activity, pregnancy and/or childbearing. Also, most initiatives target a broad range of adolescents, including both male and female adolescents, white and non-white teens, and teens at the early, middle, and late stages of adolescence. However, it is important to note that many programs are very female focussed, either totally ignoring males as part of the process leading to teen pregnancy or simply not including them in the program. When appropriate, interventions that target a specific subgroup of adolescents are noted. Because pregnancy prevention programs tend to target youth of all ages, including pre-adolescents (10 to 12 years of age) as well as young adults (early 20s), we do not offer a precise definition of adolescence in this report.

This review is organized around the types of approaches employed in interventions. These approaches include: abstinence programs, sex education, family planning services, pregnancy resolution services, school-based clinics, mentoring and role modeling approaches, programs to promote self-esteem, approaches that build cultural pride and a positive sense of history, community-based initiatives, programs that seek to enhance life options for youth, and comprehensive programs which incorporate multiple elements. Within each approach, specific programs may focus on encouraging abstinence, increasing contraceptive use, affecting pregnancy resolution, reducing the incidence of subsequent pregnancies, or a combination of these goals.

In this chapter we discuss a variety programs. We describe all of the best designed or best evaluated programs; we also review a number of innovative programs. Discussion of a program does not represent an endorsement of the program; indeed weaknesses in program models and evaluation design receive particular attention, because these weaknesses so frequently undermine our ability to reach conclusions regarding program impact. We are able to describe only those programs with sufficient documentation to outline the goals of the intervention and its intended or observed results. Summaries of all programs identified through a search of the published and unpublished literature are provided in Appendix C.

Although families can and should play a central role in helping their adolescents avoid pregnancy, our review generally focusses on organized programs. Though several of these programs take the family as their focus, most do not. Thus, the role of the family receives less attention than might be warranted. For example, as discussed in the companion volume to this report (Moore, Miller, Glei, and Morrison, 1995), families can and do play a critical role in affecting the risk of adolescent pregnancy. While some of the programs that are reviewed and some of the programs that are suggested for implementation involve families, most of the programs considered in this report represent approaches that are complementary to or in addition to the information, guidance, and monitoring provided by families.

Evaluation Strategies

A wide variety of evaluation strategies have been used to examine the outcomes of teen pregnancy prevention programs. Programs included in this review are tabulated in Appendix A according to their evaluation strategy. As this table shows, only a minority of programs have been evaluated using experimental methods.

Experimental studies are almost universally acknowledged as the most definitive strategy for assessing causal impacts (Miller, Card, Paikoff, and Peterson, 1992). Only when eligible persons or organizational units (such as schools, clinics or families) are randomly assigned to be in either the treatment or the control group can policy makers be assured that any effects that are associated with program participation are not in fact due to some extraneous factor, such as higher motivation on the part of youth who volunteer to participate or who participate actively and regularly in a program. Even in experimental studies, impact estimation may be undermined, if rigorous procedures are not followed; for example, it is essential that random assignment be conducted without exceptions and that only experimentalist receive the experimental treatment.

However, random assignment experimental studies are generally costly to conduct. In addition, randomly assigning individuals or families to a control group can be difficult to implement (e.g., providers may object to withholding program services from members of the control group).

Moreover, many program administrators and funders do not place high priority on rigorous evaluation of their program's impact, instead preferring to put their dollars into services rather than research. As a consequence, relatively few true experimental studies have been done on the topic of adolescent pregnancy (see Appendix A).

Quasi-experimental studies have been conducted more frequently. These studies typically compare outcomes for the treatment group with outcomes for a similar population who do not receive the treatment (Cook and Campbell, 1979). The disadvantage to this design is that without random assignment, policy makers cannot be certain that any effects associated with the intervention are actually due to the program itself or to other differences between the comparison group and the treatment group. For example, a school in a neighboring community may be used as a comparison population for a study of a school-based clinic; however, if the mayor of that neighboring community initiates a community-wide pregnancy prevention campaign, for example, it will be difficult to assess whether any effects, or lack of effects, are due to the school-based clinic or to extraneous factors.

There are several types of quasi-experimental designs, some of which are more rigorous than others because they control for effects due to extraneous factors (e.g., use a comparison group). For instance, the one-group, pre-test/post-test design[1], which does not include a comparison group, is problematic because the researcher is unable to determine whether changes between pre- and post-test can be attributed to factors outside the context of the intervention. Another quasi-experimental approach employs a single experimental group which receives the program and a single comparison group which does not receive the program; both groups receive a single post-test assessment. A stronger design would combine a comparison group approach with a pre- and post-test assessment approach.

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[1] This evaluation strategy involves a single group of individuals who are observed prior to receiving an intervention (pre-test or baseline assessment), who then subsequent to the pre-test receive the specified intervention, which is then followed by a post-test observation (follow-up survey or assessment).

Natural experiments sometimes provide useful opportunities to examine the effects of program changes. For example, if a state initiates a state-wide campaign to reduce adolescent pregnancy, teen birth rates before the campaign can be compared with rates after the campaign has been in place for several years. Again, however, it may be difficult to interpret any changes as program impacts, because other changes may be occurring at the same time (such as increased unemployment or changes in federal welfare regulations), and it will not be clear which changes are responsible for any effects that are observed.

Micro- or individual-level analyses can also be conducted on available survey data, for example, the National Longitudinal Survey of Youth (NLSY) or the National Survey of Family Growth (NSFG). Policy variables such as funding for family planning, sex education, and welfare benefits can be appended to data bases that contain information about adolescent fertility behavior, family characteristics, adolescent goals, and demographic characteristics. Associations between policy variables and adolescent fertility, over and above the influence of family and sociodemographic factors, can be suggestive; but again without random assignment, definitive conclusions about causality cannot be reached. Similarly, **macro-level analyses** can be conducted with data aggregated to the state, city, county or other level, to examine, for example, state-level birth rates. In such analyses, states with varied policies can be compared, net of social and demographic differences; however, the same caveat applies that causality cannot be definitively addressed.

As is evident in Appendix A, numerous programs have been implemented, only a minority of which are true experimental studies. In the rest of this chapter, we will describe a variety of these studies with various approaches and their findings. In addition, we will comment on the evaluation designs of specific studies.

Family Life or Sex Education Programs

Family life or sex education is the most common approach to preventing pregnancy among adolescents. Sex education programs generally provide factual information about sexuality, reproduction, and sexually transmitted infections. Curricula focus on specific aspects of anatomy and physiology, basic aspects of pregnancy and childbirth, and discussions of sexually transmitted infections (Drolet and Clark, 1994). Most of these types of programs, particularly in recent years, have augmented factual information with discussions about decision-making and clarification of values regarding sex and sexual relationships. Some of these approaches also include strategies for improving communication between parents and their adolescent children. The premise of these augmented approaches is that youth require not only knowledge about sex and reproduction, but also guidance about the appropriate context for sexual behavior. The goal of these programs, therefore, is to encourage teens to align their attitudes and values with those of traditional institutions such as the family, the church, or community, often as a means to promoting abstinence.

Sex education programs have been successful in increasing teens' knowledge, at least in the short-term, about sex, reproduction and contraceptive effectiveness. Students participating in sex education show substantial increases in short-term knowledge relative to students receiving no exposure to sex education (Kirby, 1994; Eisen, Zellman, and McAlister, 1990; Donahue, 1987). Among the studies we reviewed, there is only limited evidence as to whether or not long-term knowledge gains occur among adolescents exposed to sex education. However, *Reducing the Risk*, a program that combined an abstinence message with information about contraception, was evaluated with a quasi-experimental design which showed that increases in knowledge remained 18 months after program participation (Kirby, Barth, Leland, and Fetro, 1991). Also, youth who participated in *STEP, the Summer Training and Education Program*, which combined sex education with remedial math and reading and job training services, continued to have higher knowledge scores several years after program participation (Grossman and Sipe, 1992).

Abstinence and Delayed Sexual Initiation

Numerous sex education programs focussing on abstinence and the delay of first sex among adolescents have been implemented (Weed, DeGaston, Prigmore and Tanas, 1991; Eisen, Zellman, and McAlister, 1990; Vincent, Clearie, and Schluchter, 1987; Kirby, Barth, Leland, and Fetro, 1991; Howard and McCabe, 1992, 1990). Some of these initiatives focus on attitudes about early sex and behavioral intentions; others target communication with parents and peers regarding values supportive of abstinent behavior; others take a more comprehensive approach involving parents, schools, and religious institutions.

Programs which attempt to influence adolescent attitudes about early or premarital sex presume that teens with attitudes opposed to early sexual behavior will be more motivated to avoid sex, or more able to handle high-risk situations when they occur. Pregnancy prevention programs that focus on abstinence generally employ curricula that include factual information about human reproduction, but also offer students guidance about how to interpret messages they may receive from peers and the media, and how to make choices that can help them abstain from having sex. For example, the *Living Smart* curriculum, developed by Core-Gebhart, Hart and Young (1991), and later revised in 1993 as the *Sex Can Wait* curriculum, "presents sexuality as a positive part of the human experience, represents sexual thoughts and feelings as healthy and normal, but emphasizes the building of basic skills, and the promotion of abstinence as a positive choice for young people" (Young, 1994, p. 434).

Topics covered in abstinence-based curricula range from male and female reproductive anatomy and physiology and sexually transmitted infections, to sessions on self-esteem, communication, and sexual decision-making, to goal setting and life planning. Materials that include information about contraception or discussions about contraception are generally not a part of abstinence-focussed curricula.

Abstinence-only sex education appears to have at least a short-term influence on adolescents' attitudes about sex and their intentions to have sex. For example, the *Human Sexuality - Values and Choices* initiative (Donahue, 1987), a five-site intervention program in communities across the United States, offered a short-term intervention of 15-class sessions for seventh and eighth graders, with an accompanying three-session course for parents. The purpose of the curriculum was to reduce teenage pregnancy through teaching not only the facts about human reproduction, but also societal values about sexual abstinence and the range of sexual issues facing adolescents. Self-administered questionnaires were given to students and a group of comparison students (i.e., students from the same school who did not participate in the course) immediately before the course began (baseline), immediately after the course ended (short-term post-test), and three to four months after the course was completed (longer-term post-test). No information regarding how students were selected to receive the *Values and Choices* curricula is reported.

Findings from the post-test given immediately at the end of the program show that students exposed to the program were more likely to favor sexual restraint, less likely to intend to have sex during their teen years, and less likely to intend to have sex before marriage than the comparison group of students who did not receive the program. However, no association with attitudes about abstinence or behavioral intentions was observed three to four months after exposure to the curriculum.

While short-term effects of the program on participants' attitudes relative to comparison students are documented and a comparison group was assessed, the results of the program are limited by the fact that the comparison group consisted of students enrolled in the same school, but who simply did not take the 15-session course. It is possible that participating students may have shared what they learned in the classroom with comparison students during lunch periods or other after school activities, or that participants and comparisons dated one another, thereby reducing the measured impact of the program. Thus, program findings may be a conservative estimate of the association of the *Values and Choices* curricula on student attitudes and intentions to have sex. The author acknowledges that the use of a comparison school with similar characteristics would represent a more informative evaluation strategy; however, difficulties were encountered in identifying demographically comparable schools in the same communities in each of the five intervention sites.

At least one other abstinence-focussed sex education program, the *Teen-Aid Family Life Education Project*, demonstrates effects on the attitudes and behavioral intentions of junior high participants, comparing pre-test with post-test scores on a measure of values regarding abstinence and premarital sex (Weed, DeGaston, Prigmore, and Tanas, 1991). Findings also suggest that a substantial number of other factors, besides abstinence education, influence adolescents' behavioral intentions. For instance, intentions to have sex were significantly influenced by the extent to which students described their immediate peer environment as sexually permissive, including greater peer pressure to have sex and dating patterns within the school environment. Without addressing such factors either in a comprehensive curriculum or including involvement from peers or community members, it may be difficult for sex education alone to demonstrate sizeable impacts on behavioral intentions among youth.

Several abstinence programs also include strategies to improve communication skills among adolescents, with particular focus on parent-adolescent and peer-peer communication. Such programs are often community-based, in an attempt to involve parents and other community institutions such as the church. One such example is a one weekend, 10-hour church-based sex education program for high school age students (Green and Sollie, 1989). Adolescents from a youth group at a Baptist church and their parents were shown a series of films and participated in panel discussions and small group activities about sexual issues, including sex roles, premarital sex, contraception, and abortion. Community leaders including psychologists, ministers, and medical personnel served on the panel and participated in the small group activities. Adolescents were asked to report the extent to which they had discussions about sex or sexual issues with four target individuals -- mother, father, same-sex best friend, and dating partner. A group of youth from a church of similar size, religious stance, and various background characteristics served as a comparison group. The authors report no significant short-term (two weeks after the intervention) or longer-term (four months post-test) effects of the program on the amount of communication with any of the four target persons among youth participants relative to comparison youth. Four months after the program, females from both the intervention and comparison groups reported higher levels of communication with their dating partners than did males; communication with parents relative to peers increased over time for both groups. Thus, effects of the intervention could not be identified. No information regarding exposure of comparison youth to other sex education programs or sexuality information is reported. While some attempt was made to employ a comparison group of youth, the results of the program are limited by the small sample size (24 participants, 22 comparison youth), and self selection of youth participants.

Other attempts at improving parent-teen communication via sex education have been somewhat more successful. The *FACTS & Feelings* initiative in Northern Utah (Miller, Norton, Jenson, Lee, Christopherson, and King, 1993) used video and information brochures to help parents and young adolescents (aged 12-14) talk about sexual issues at home. About 6000 families were invited to participate, out of which 548 families volunteered. Families were randomly assigned to one of three study groups: families receiving videotapes and accompanying discussion materials, families receiving the video only, and families receiving neither video nor printed information. Three months after the program, the authors found an increase in parent-teen communication among both groups receiving program materials. However, both groups returned to their pre-program levels of communication within one year, suggesting the need for interventions designed to sustain initial improved communication. Extrapolation of the results of this program is limited by the selectivity of program participants; the sample was also extremely homogenous, demonstrating little variability as to race or fertility-related outcomes and characteristics.

A common concern among opponents of sex education is that such programs will increase the likelihood of youth becoming sexually active. However, findings generally indicate that sex education does not increase the likelihood of initiating sex among adolescents. Although Marsiglio and Mott (1986), using data from the 1979 cohort of the National Longitudinal Survey of Youth

(NLSY), found prior exposure to a sex education course to be associated with initiating sexual intercourse at ages 15 and 16, though not at ages 17 and 18, other studies using survey data have not found comparable associations (Dawson, 1986; Furstenberg, Moore, and Peterson, 1985). More recent efforts suggest that exposure to sex education can actually delay transition to first sex. Eisen, Zellman, and McAlister (1990) note that 64 percent of male adolescents participating in the *Teen Talk* program, a 12-15 hour sex education course, who had not had intercourse prior to receiving the curriculum, remained abstinent at the one-year follow-up, compared with 56 percent of the comparison group, a statistically significant difference.

Teen Talk was a four-year, multi-site, sex and contraceptive education initiative conducted as a collaborative effort between school and community health centers in Texas and California. The initiative employed a public health oriented approach that combined elements of the Health Belief Model and Social Learning Theory (HBM-SL) (Rosenstock, Strecher, and Becker, 1988).[2] Adolescents at six community-based family planning agencies and one independent public school district (two sites) were randomly assigned by classroom or individually to the HBM-SL (experimental) or the existing sex and contraception educational outreach curriculum (control). Each health agency recruited its own study sample, while the school district used its eighth- and ninth-grade student population. Data were collected from participant and control youth at three points during the study period: Time 1 - before exposure to the intervention at each respective site; Time 2 - immediately after the intervention; and Time 3 - twelve months after the intervention.

We note that this initiative is a theory-based sex education curriculum, and also includes a experimental evaluation design. Theory-based approaches have become more common in recent years, but the majority of sex education programs still are not guided by theory.

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[2] See the Theoretical Approaches and Intervention Models section of Chapter III for a discussion of the Health Belief Model and Social Learning Theory.

Where theory-driven sex education has been used, such efforts appear to demonstrate more consistent impacts on sexual behavior than traditional sex education. For example, a comprehensive approach based on Social Learning Theory and Diffusion Theory[3] was employed in a school/community-based program in South Carolina (Vincent, Clearie, and Schluchter, 1987). The specific approach combined school-based sex education with a community-wide effort to increase knowledge and awareness about sexual issues. An evaluation of this initiative indicates that significant declines occurred in estimated pregnancy rates in the target county, compared with comparison counties. The generalizability of the initiative was limited by the fact that the sample was located in a small, rural community, which generally reported a small number of adolescent pregnancies. Moreover, there was no way to know with certainty that the decline in pregnancy rates was due to the intervention or to other social phenomena. Furthermore, the authors targeted sexual initiation as one of their outcome measures, yet no assessment of sexual activity was conducted. Thus, it was difficult to determine whether the effect of the intervention on teenage pregnancy rates was due to changes in sexual initiation, contraceptive use, or the reporting of abortion.

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[3] Diffusion Theory focusses on communication techniques and outreach efforts to fully immerse individuals as well as communities in the topic of interest (e.g., family planning), leading eventually to behavior change (Green, 1975; Rogers and Shoemaker, 1971; Rogers, 1973). Specifically, behavior change is analyzed over time through a series of stages: 1) awareness of issue or problem; 2) interest in or concern about the issue; 3) trial, or preliminary involvement in the behavior (e.g., use of family planning services, use of a particular contraceptive method); 4) decisions, where individuals or the community make a conscious choice to accept the intervention or method; and 5) adoption, final acceptance and use of the target behavior. The ease with which communities pass through each of these five stages indicates which types of education strategies may be most appropriate. For example, communities that reach stage five quickly after the issue or program has been introduced are considered innovators or early adopters; mass media strategies may be the most efficient strategy. Communities that are less inclined to become interested or involved in behavior change activities are considered late adopters; home visits or extensive community outreach may be necessary to affect behavior change.

A reanalysis of the South Carolina program data was conducted to examine more closely specific program impacts on adolescent pregnancy (Koo, Dunteman, George, Green, and Vincent, 1994). These analyses confirmed that a significant decline in adolescent pregnancy rates occurred in the intervention area during the program period. Moreover, it was found that pregnancy rates returned to pre-program levels after the discontinuation of several program components and related non-program services. Specifically, the contraceptive counseling and supplies were no longer provided, and the school nurse left the program. The nurse not only provided contraceptive counseling and made condoms available to teens, but she also transported female adolescents to the county health department family planning clinic. With the truncation of these varied inputs, the pregnancy rate went back up.

Another example of a theory-based initiative is *Reducing the Risk* (Kirby, Barth, et al., 1991), a 15-session health education curriculum based on Social Learning Theory (see footnote on preceding page), Cognitive Behavioral[4] and Social Inoculation Theory.[5] The curriculum places strong emphasis on avoiding unprotected sex, either by postponing sexual involvement or using contraception.

The program targeted tenth grade students via health education classes in schools throughout California. A quasi-experimental evaluation design, with a six-month and 18-month follow-up, was used to assess the impact of the intervention on delay of sexual initiation and on frequency of sex and contraceptive behavior. Schools were recruited through a letter of inquiry sent to 252 high schools in 140 school districts with existing sex education programs. In order to be eligible to participate, school districts had to have a high school with at least two sex education classes, so that a within-school comparison group could be selected. Assignment to the treatment group -- the *Reducing the Risk* curriculum -- and the comparison group -- a different or existing sex education curriculum -- was done randomly whenever feasible. When classes were of unequal size, larger classes were assigned to the treatment group to maximize statistical power. At the time of the pre-test, 1,033 students completed assessments, with 586 receiving the treatment curriculum and 447 receiving a comparison curriculum.

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[4] See the Theoretical Approaches and Intervention Models section of Chapter III for a discussion of Cognitive Behavioral Theory.

[5] Social Inoculation Theory postulates a process that is similar to physiological inoculation. That is, people develop a resistance to strong social pressure by first learning to resist weaker forms of pressure. So, this occurs when they become able to recognize the various forms of pressure, become motivated to resist that pressure, and then practice resisting weak forms of that pressure (McGuire, 1964; Barth, Leland, Kirby, and Fetro, 1992).

Findings from the program indicate that comparison youth were significantly more likely than participant youth to have initiated sex by the 18-month follow-up; sexually active youth in the treatment group were significantly less likely to engage in unprotected sex compared with sexually active youth in the comparison group. No impact on the frequency of sexual activity was observed. Evaluation data also indicated an increase in pregnancy rates among program participants, but the increase was not statistically significant. While this initiative addresses many of the gaps in the literature on sex education curriculums and pregnancy prevention, a fairly sizeable attrition rate was observed (27 percent overall attrited by 18 month survey). Attrition rates were higher for males (32 percent) than females (21 percent), but comparable for treatment and comparison group members (26 percent). It was also difficult to control for contamination of the comparison group by additional education programs or interaction with participating youth.

Programs that combine factual information with assertiveness training and instructions for improving decision-making and communication skills also appear more promising for affecting adolescent sexual behavior than fact-based sex education alone. In general, these programs focus on helping teens develop specific skills to negotiate difficult or risky interpersonal situations. The assumption of these types of initiatives is that even when adolescents know what to do, they do not always have sufficient skills or enough fortitude to properly act on that knowledge. While this approach is promising, evaluation data do not clearly indicate which aspects of the skill-building strategy are most conducive to behavior change.

One well-known program combining factual information and skill-building is entitled *Postponing Sexual Involvement* (PSI; Howard and McCabe, 1992, 1990). It was developed by the Emory University School of Medicine/Grady Memorial Hospital Teen Services Program, a family planning program for students aged 16 and younger. This program is designed to provide junior high and high school age students with skills to resist peer pressures that lead them into early sexual involvement. The curriculum offers a clear message that favors postponing sexual intercourse, but also provides information about contraception to youth participants. Skill-building exercises conducted by slightly older peer educators are key elements of the program.

The program consists of 10 sessions which are presented each year to all eighth grade students in 19 schools, reaching approximately 4,500 students each year. Each session is generally led by one male and one female student from the junior or senior class in that school. These peer leaders are recruited, trained and supervised on-site in each classroom by the Emory/Grady Teen Services Program staff.

Low-income teens most likely to be at risk for early sexual involvement and most likely to use health services at Grady Memorial Hospital--a public health care facility--were targeted to assess the impact of the PSI initiative. Birth records at Grady Memorial were used to identify low-income male and female students who were expected to enter the eighth grade in 1983. Low-income or poverty status was presumed by whether the student or the student's mother had received care from Grady Hospital within the past five years. It was assumed that some proportion of these teens would also be attending schools where the PSI initiative was being implemented, while the remaining proportion would be attending other schools, forming a natural comparison group. The study population consisted of 536 low-income minority students, 395 from PSI program schools, and 141 from other schools in the area. Evaluation data were collected via telephone interviews at the beginning, middle, and end of the eighth grade, the year in which the program was given, as well as the beginning and end of the ninth grade year. In addition, medical records of the young women in both the program and non-program schools who had visited Grady Memorial within the past five years were reviewed for information regarding sexual involvement, pregnancy tests, treatment of sexually transmitted infections, and receipt of family planning services.

Results from the study indicate that a significantly smaller proportion of participant youth reported being sexually active by both the 12- and 18-month follow-ups, relative to non-participants, even though a slightly higher, but not statistically significant, proportion of the program group had sex before receiving the PSI curriculum. The effect on delayed first sex was observed for both male and female participants. The authors report that by the end of the eighth grade comparison group males were more than three times as likely to have begun having sex (29 percent) as were males who had participated in the program (eight percent). By the end of the ninth grade, the proportion of males who had ever had sex increased in both the program and comparison groups; but the percent was still significantly smaller among program males (39 percent) than among males who did not participate in the program (61 percent).

The impact on delayed sex among female participants was particularly strong. At the end of the eighth grade, females not participating in the program were as much as 15 times more likely to have initiated sex as girls exposed to the PSI curriculum. By the end of the ninth grade, the disparity in the proportion of females having first sex diminished, but remained significantly higher among comparison group females than participant females.

Proportionally fewer program females becoming sexually active presumably led to fewer female participants at risk for pregnancy. While a true assessment of the impact of the program on pregnancy rates cannot be conducted[6], the authors estimate the impact of PSI on pregnancy rates via a delay in sexual initiation. Specifically, they estimate that if females exposed to the program became sexually active at the same rate as comparison group females, but maintained their 18 percent pregnancy rate, exposure to the PSI initiative the program would have reduced the incidence of pregnancy by one-third.

To examine the program's impact on avoidance of pregnancy once sexual activity is initiated, the authors compared the proportion of pregnancies among program girls who became sexually active to those in the comparison group who were sexually active. These rates were similar (18 percent and 16 percent, respectively), indicating that the human sexuality and family planning information provided in PSI are not sufficient to help many sexually involved young people avoid pregnancy.

Service-Based Approaches to Pregnancy Prevention and Pregnancy Resolution

Most service-based approaches to pregnancy prevention promote contraceptive use among sexually active teens. Only a minority of service-based initiatives focus on pregnancy resolution. Many of these programs include both a knowledge and skill-building component consistent with those previously described.

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[6] Pregnancy rates are calculated per 1,000 females. However, because of the small sample size of the PSI program, impacts on pregnancy rates should be interpreted with caution.

Family Planning Services

The main objectives of family planning services are to provide access to contraception and reproductive health services, to reduce specific barriers to contraceptive care, and to provide teens with the skills needed for consistent and effective use of contraception. Family planning service interventions tend to employ a medical model, although some recent and quite promising initiatives have begun to employ a psychosocial approach, focussing on cognitive and behavioral skills, satisfaction with services,[7] and services specifically tailored for young clients.

Making family planning services more accessible and affordable can be an effective means to increase contraceptive use. Based on data from the 1988 National Survey of Family Growth (NSFG), an estimated 2.8 million females in the U.S. aged 15-19 had one or more family planning visits (either at a clinic, private medical source, or counselor) during the past year. Among those who had a family planning visit, 62 percent used a clinic at their most recent family planning visit (Mosher, 1993). Thus, a substantial number of young clients are already obtaining pregnancy prevention services through a family planning service delivery system. However, since 71 percent of the teen pregnancies that occurred in 1987 are estimated to have occurred when the teen was not using contraception (Moore, Snyder, and Glei, 1995), it would appear that there is room for considerable improvement in the use of contraception among U.S. teens and their partners. The best approach for delivering such services, or the most appropriate service delivery sector at which to target those efforts, is much more difficult to ascertain. For example, family planning services are delivered in a variety of settings by a variety of different providers including family planning clinics, hospital outpatient departments, health maintenance organizations, as well as through private physician practices. Young clients may seek care from any one of these types of providers, but would represent only a portion of the family planning clients being served by any one family planning provider.

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[7] Satisfaction with health or family planning services captures a range of the clients' perceptions about the adequacy of health care services that were received. Measures of satisfaction might include, among other characteristics, patients' perceptions about whether sufficient time was spent with the health care provider, whether the information received was sufficient and could be easily understood, whether staff were friendly or courteous, as well as the waiting time to see a provider and length of time to secure an appointment (See Sonenstein, Schultz, and Levine, 1994, for discussion on women's satisfaction with reproductive health services).

In addition, funding for family planning services comes from a variety of sources, including public funds, such as the Federal Title X program,[8] and Federal block grant programs such as the Maternal and Child Health Block Grant, as well as private sources and client fees. Each type of service delivery setting may have a different funding stream or a mixture of funding sources, and not all monies targeted for family planning services are used to offer specific initiatives to teen clients. The variability in funding and service delivery scenarios, and the range of services and providers that may be available to teen clients makes assessing the impact of family planning services on teen pregnancy particularly difficult (Sugland, Blumenthal, and Moore, 1994).

Nonetheless, given that consistent and effective use of contraception leads to a lower likelihood of pregnancy, it would seem that family planning initiatives could be an important element in the prevention of pregnancy among adolescents. There is some evidence from analyses of state-level data that suggest that family planning funding can reduce adolescent fertility. Specifically, greater funding for contraceptive or family planning services has been found to be associated with fewer unintended pregnancies (Forrest and Singh, 1990b) and lower rates of out-of-wedlock childbearing among teens (Moore, Blumenthal, Sugland, et al., 1994). The percent of teens at risk of pregnancy who are served at family planning clinics is also associated with lower state-level birth rates (Singh, 1986).

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[8] In 1973, Title X of the Public Health Services Act was created, which established a Federal categorical grant program funding a network of family planning service delivery agencies throughout the country, and providing a broad range of family planning and contraceptive services, particularly targeting low-income women.

What is less understood, however, is what aspects of clinic services are most helpful for initiating and sustaining contraceptive use among adolescents, and what are the best strategies for reaching young clients within a larger clinic delivery system.

The first step in promoting contraceptive use among adolescents through family planning services is attracting the teen client before first sex or very shortly thereafter. Evidence suggests that, on average, adolescents delay seeking contraceptive services for almost one year after becoming sexually active (Zabin and Clark, 1983). Procrastination, ambivalence, and concern about confidentiality are among the reasons cited for not seeking contraceptive services sooner. In a study consisting of 1,243 never pregnant teen patients who had received services in 31 family planning clinics located in eight cities across the U.S., more than one-third of teens were found to make their initial contraceptive visit because they suspected they were pregnant (Zabin and Clark, 1981). More recent evidence on the timeliness of receiving contraceptive services among teen clients is not available.

One clinic-based initiative is attempting to encourage earlier use of family planning services and effective birth control for teens by removing aspects of service delivery that appear to be most intimidating or difficult for adolescents. *Smart Start* (Donovan, 1992a) is an initiative that minimizes fear of medical procedures associated with the pelvic examination and blood testing typically done at an initial family planning visit. The initiative employs three different intervention strategies: 1) anticipatory counseling, where individualized sessions are conducted focussing on the needs and circumstances of each teen. Increased time is spent discussing the teen's concerns about medical procedures and method selection; 2) a delay option is provided, where oral contraceptives are provided at the initial visit but clients have the option of postponing the medical examination until a subsequent visit in order to provide teens with more adequate time to become familiar and comfortable with clinic procedures;[9] and 3) telephone follow-up is conducted between 5 and 10 days after the teen's first visit to schedule a return appointment and to answer questions or concerns about methods or procedures. Although evaluation results on this strategy are still preliminary and incomplete, the results appear promising. Nearly 25 percent of teens chose to delay the pelvic examination, and 40 percent delayed blood testing at their initial visit. Adolescents who delayed their medical procedures were somewhat more likely to return to the clinic for their subsequent visits than teens who received medical procedures at their initial visit. Those who delayed were also less likely to be pregnant eight months after their initial visit.

Clinic based initiatives also target other aspects of service delivery to increase clinic attendance among adolescents. One such initiative is a city-wide effort in Philadelphia entitled *Responsible Education on Sexuality and Pregnancy for Every Community's Teens* (RESPECT) (Hughes, Furstenberg, and Teitler, 1995). The initiative incorporates expanded clinic hours reserved for teen clients, peer educators, and improved training of staff, especially with regard to the special needs of teens. The initiative also includes a school and community-based component and a media campaign. Teenagers in the targeted communities showed no improvement in rates of pregnancy or childbearing. Trends in contraceptive use improved in the catchment areas, while contraceptive use decreased in the city-wide sample. However, these differences were not statistically significant. This lack of statistically significant findings may be due to the relatively small size of the city-wide sample in the first wave of this study. The evaluators note that it is difficult to sort out which changes in service delivery relative to school or community-based efforts were most effective, but that a strong partnership between the clinic and the school may have been a potentially effective part of the program.

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[9] Comprehensive family, social, and medical history was taken at the initial visit, as well as basic medical services including a urine pregnancy test. The staff did not offer the delay option if the interview suggested it was not a good idea.

Winter and Breckenmaker (1991) have developed a total service delivery strategy targeted specifically toward adolescent clients. Their service delivery strategy uses a psychosocial rather than a medical model for delivering contraceptive care. Their approach splits what is typically called an initial clinic visit into two appointments, with counseling and education at the first visit and the medical examination given at the second clinic visit after which the client began using her medical method of birth control. The strategy also involves one-to-one education sessions which adds 15-20 minutes to the education sessions and adds an additional visit six weeks after the medical examination has been conducted. In-service training was required for staff regarding adolescent psychosocial development, with one designated staff person who was specially trained as a teen counselor. A total of 1,261 teen clients (518 experimental and 738 comparisons) were included in the study. Teen clients exposed to the modified clinic delivery system (e.g., initial visit over two appointments) demonstrated higher contraceptive continuation rates at six months than teens receiving family planning services via the traditional approach (e.g., initial visit as one appointment);

participants also reported significantly greater ease in coping with method related problems, although such differences diminished by the 12-month follow-up. Pregnancy rates (percent reporting a pregnancy at any clinic visit) were lower among patients receiving the tailored approach than among non-program participants (4.0 percent versus 7.8 percent, $p < 0.05$)[10]. There is little information, however, regarding which aspects of the modified service delivery strategy are associated with lower pregnancy rates and higher contraceptive continuation rates (e.g., initial visit as two appointments, in-service training, and designated teen counselor). The tailored strategy, while promising, also has important cost implications. The additional service activities tend to increase staff workload. The additional cost makes it crucial to identify which elements of the package are critical and whether some components might be dropped.

Other approaches to increasing contraceptive use among adolescents within the clinic-based system have been documented as well (Herceg-Baron, Furstenberg, Shea, and Harris, 1986; Namerow and Philliber, 1982). Strategies include involvement of adolescents' family members to increase communication regarding contraception and support for contraceptive services, as well as more frequent telephone contact with teen clients to address questions and problems regarding contraceptive methods. Such efforts have shown no significant impact on regularity of contraceptive use, pregnancy rates or clinic continuation rates.

As with approaches targeting sexual activity, cognitive and behavioral skills training appear to be effective at promoting contraceptive behavior (St. Lawrence, Brasfield. Jefferson, Alleyen, O'Bannon, and Shirley, 1994). One such effort, the *Cognitive Behavioral Intervention to Reduce*

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[10] These rates are based on the 740 patients for whom follow-up data were available. As a proportion of the total original sample ($n = 1{,}010$) the comparable figures were 3.1 percent versus 5.5 percent ($p < 0.10$).

African-American Adolescents Risk for HIV Infection, shows that a combined education and skills initiative can be effective at reducing high risk sexual behavior. Youth were randomly assigned to the education program (control) or the education and skills training (experimental) groups. A substantial reduction in rates of unprotected high risk sexual behavior among black male experimentals compared to controls was noted. Significant increases in condom use were observed for male and female participants, although male participants showed a decrease in condom use by the one-year follow-up.

Pregnancy Resolution Services

Most cities have one or more services developed to encourage pregnant women to eschew abortion and select either adoption or parenting. Formal evaluations of these programs have not been identified; indeed, the number of women receiving such pregnancy counseling services is not known. Moreover, evaluations are scarce for other services that attempt to be value neutral, that is, whose goal is to help pregnant teens make thoughtful and well-informed decisions about whether parenthood, abortion, or adoption is the right choice for them. Nor have we identified formal efforts that espouse legitimization of a child via marriage when conception occurs outside of wedlock. Family planning providers make a point of offering options counseling for those teens who have a positive pregnancy test. However, family planning providers tend not to view such services as interventions *per se*, with a specific goal or outcome in mind (e.g., helping teens to choose adoption over an abortion). Rather, services are designed to provide information to help the teen come to a decision that she defines to be best and most appropriate for her. Even so, such counseling efforts have not been formally evaluated, either for their impact on adolescent pregnancy resolution decisions, for their association with client satisfaction, or for short-term or long-term comfort with a specific resolution option.

We have found two studies that document specific programs focussed on adoption counseling and placement among pregnant and parenting teens. One of those programs, entitled *Adoption Associates*, is located in St. Louis, Missouri, and has been in existence since 1989 (Donovan, 1992b). Adoption counseling services were initiated by an abortion provider because of concern that adolescents considering adoption were getting lost through their regular referral process. *Adoption Associates* was developed to provide counseling, to assist young mothers to secure Medicaid, and to offer guidance regarding the legal aspects of adoption and associated prenatal care. Though this program offers support for the notion that abortion and family planning providers can be concerned that adolescent clients are being adequately and appropriately served in making a difficult and life changing decision, no formal evaluation of the intervention has been conducted.

The second program was instituted among 29 of the Adolescent Family Life (AFL) Care Demonstration projects across the country in 1989, serving roughly 870 adolescent clients (McLaughlin and Johnson, 1992). The programs emphasize pregnancy counseling to encourage placement of the child for adoption. While no formal evaluation of this program has been conducted, comparisons of relinquishment rates of AFL clients with national rates of adoption placement are provided. AFL participants show an 11 percent relinquishment rate compared with the two percent rate among the overall population. On the other hand, one-half of those teens initially intending to relinquish their child ultimately decided to parent. While some attempt is made to compare outcomes among AFL participants with another group, comparisons with the overall population are inappropriate, as the comparison population includes both adults and adolescents. Furthermore, since teens choosing to abort tend not to participate in AFL programs, AFL participants are unlikely to be representative of most teens in the U.S.

It bears mentioning that the adoption project described above represents only one component of a broad range of projects funded by the Adolescent Family Life Program, administered by the Office of Population Affairs of the U.S. Public Health Service, and should not be considered as representative of the full range of AFL programs. AFL initiatives also target the determinants and consequences of adolescent premarital sexual relations, including teen-parent communication, peers, mass-media, the impact of availability of services and service delivery outcomes on infant and maternal health, and factors that influence the quality of adolescent parenting, including the role of family members and the impact of adolescent parenting on the development of the child (Card, 1988).

It is surprising that the concern over abortion and non-marital births among adolescents has not resulted in a constellation of formal intervention programs with rigorous evaluations, that seek to encourage/discourage a specific pregnancy resolution option, or to encourage/discourage marriage or the occurrence of a birth within/outside marital union. It is difficult to determine precisely why the number of such formal intervention programs is small. Indeed, the capacity to deliver such interventions may be influenced by a myriad of factors. For instance, program providers may lack the financial or human resources to undertake an additional program component such as formal options counseling, particularly as such an initiative would require additional counseling time or referral services. Program providers may feel they lack the necessary training in psychology or social work to adequately assist young clients with their pregnancy resolution decisions. Providers may also have concerns that decisions about how to resolve a pregnancy are intensely private, and should not be complicated by outside efforts attempting to persuade adolescents toward a particular option. Alternatively, providers of pregnancy resolution services may be less likely to publish descriptions of their programs in the form of formal reports or professional and/or academic journal articles. The lack of information suggests the need for more documentation regarding the full array of options counseling services that are currently provided by family planning and other health care agencies. Little is known regarding who is offering such services, the content of those counseling sessions, the specific approach that is employed, or the effects on adolescents' choices regarding pregnancy resolution; information about satisfaction with such services, and their benefit to adolescents attempting to resolve an unintended pregnancy also are needed.

School-Based and School-Linked Clinic Services

Family planning initiatives have been in existence for several decades, but only in the 1980s did providers in numbers begin to adapt clinic services to target teenagers in schools. School-based initiatives were developed specifically as a means for serving youth populations. Locating clinic services within schools, on school grounds, or linking sex education initiatives with community health centers is one way to effectively target adolescents where most of them congregate. One disadvantage of the school-based approach is highlighted by evidence that two-thirds of the fathers of babies born to teens are age 20 or older (Moore, 1995), emphasizing that there is no one approach that will meet the needs of all teens and all of their partners. The proximity of school-based services nevertheless affords greater accessibility for teens, and potentially an increased likelihood of clinic use among young clients. Adolescent males as well as females can be targeted, and contraceptive services can be provided along with health services offering greater confidentiality and rapport with young clients. In 1994, over 600 school-based clinics were in operation in middle, junior, and senior high schools in roughly 41 states across the country and the District of Columbia (Schlitt, Rickett, Montgomery, and Lear, 1994). Most school-based clinics are comprehensive health centers, however, focussing primarily on the provision of primary health care, with family planning services offered to varying degrees as one of many services. Few school-based health centers dispense contraceptives or offer prenatal care services, although contraceptive counseling and referrals are provided for those adolescents seeking birth control.

Evidence from a recent review of six school-based clinic programs indicates a limited impact of such initiatives on adolescent fertility-related behavior, however. Specifically, modest increases in contraceptive use among program participants have been noted, but no impact on pregnancy rates has been documented (Kirby, Waszak, and Ziegler, 1991). Findings also indicate that the presence of clinics within the schools did not hasten the onset or frequency of intercourse, a concern that is often expressed with regard to school-based clinic services. Services in four of the schools were evaluated using matched comparison schools, with a post-test design, but no long-term follow-up of participants was conducted. The remaining two sites employed a cross-sectional evaluation approach, collecting pre-clinic baseline data and two-year post-clinic data from a sample of students in the schools[11]

One comprehensive school-based pregnancy prevention services program that appears to have had some impact on pregnancy rates, at least over time, is the *Self Center* (Zabin, 1992; Zabin, Hirsh, Smith, Streett, and Hardy, 1986). The *Self Center* was a demonstration project conducted by the Johns Hopkins School of Medicine between 1982 and 1985, serving inner-city junior and senior high school students. The program was designed under the premise that pregnancy prevention services ideally should combine an effective sex education component with access to family planning services and contraceptive supplies, and counseling to assist adolescents with difficult decisions about reproductive health. The clinic was located across the street from the high school and four blocks from the junior high school. A social worker and nurse were available in each participating school to provide in-school sex education, individual counseling, and training and consultation for school faculty during school hours. The social worker and nurse were available two and one-half hours each day in the school health suite, and offered sex education presentations in homeroom classes once each semester. Students were allowed to drop by the school health suite during lunch or after school for informal group discussions, and could seek individual counseling as needed. After school, staff provided additional services at the *Self Center* clinic linking the education and service components of the program. Students were used as "peer resources" to help with informal group sessions, to function as peer counselors and to help publicize the Self Center's activities. Peer leaders were trained, supervised, and offered a small stipend for their efforts. A formal evaluation of the Self Center was completed in 1985, using a quasi-experimental/comparison group design. Findings suggest that students in schools exposed to the Center's services demonstrated significant increases in contraceptive knowledge and contraceptive use relative to youth at non-participating schools; rates of contraceptive use among students in comparison schools remained stable over the study period. Fewer than 20 percent of female students in schools exposed to the program for at least two years had unprotected sex. Also, postponement of sexual initiation up to seven months was observed for those teens in schools with long exposure to the program. Pregnancy rates in participant schools eventually declined over the study period, even though participant and comparison schools had comparable rates of adolescent pregnancy at the start of the program. Specifically, the rate of increase among program schools diminished over the first 16 months. Near the end of the second year of the program, the pregnancy rate declined by 23 percent; by 28 months after the program started, a 30 percent decline in pregnancy rates was observed. Whether specific components of the program are responsible for its success, or whether the overall program constellations accounts for its success, is not known.

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[11] This was not a longitudinal design; the students surveyed in the two-year follow-up consisted of a new sample of students.

One of the earliest and most well-known school-based clinic efforts was the *St. Paul Maternal and Infant Care Project* (MIC), which has been in operation since 1973 (Edwards, Steinman, Arnold, and Hakanson, 1980). Comprehensive care, including reproductive health services, were provided at five sites at school-based health clinics in junior/senior high schools in St. Paul, Minnesota. Specific services included sexuality education/information, counseling about how to make decisions about sexual behavior, physical examinations, and pregnancy testing. A family planning nurse practitioner served as the focal point for delivering health services to participating students. Students seeking contraception were referred to a nearby hospital clinic to receive contraceptive supplies, which were provided by the hospital free of charge. Some 400 students initially received family planning services, but by 1978, more than 1,400 students were using clinic services in the two senior high school project clinics.

Two evaluations of the St. Paul school-based clinics have been conducted. The initial evaluation, conducted in the mid-1970s, showed that participating schools witnessed a 56 percent decline in fertility rates between 1973 and 1976; contraceptive continuation rates were somewhat higher among students at the school clinics relative to adolescents receiving care at a nearby hospital-based clinic (Edward et al., 1980). No repeat pregnancies were observed among adolescents who delivered and returned to school. Due to limitations in the evaluation strategy, however, it was difficult to discern whether a real decline in fertility occurred. For example, while certain program outcomes (e.g., contraceptive continuation rates, obstetric problems, and health outcomes for infants) were compared with similar outcome data for clients at the hospital clinic, pregnancy and birth rates of school clinic participants were not compared with those of the hospital-based population, or any other relevant adolescent population (e.g., adolescents in St. Paul).

A more recent evaluation (Kirby, Resnick, Downes, Kosher, Gunderson, Potthoff, Zelterman, and Blum, 1993) calculated annual birth rates for each school, using birth data only for those female students whose names could be matched with county birth certificates. Findings from this evaluation show dramatic fluctuations in birth rates for individual schools from year to year. In addition, patterns of increases (or decreases) in one school were not always paralleled with similar changes at other participating schools.

Data on birth rates for each school also were combined for the five years before the clinics opened and for the five years after the clinics opened. Analyses show that mean birth rates in the years before the clinics opened were virtually the same after the clinics opened. The authors conclude that school-based clinics in St. Paul had no significant impact on adolescent fertility .

Mentoring and Role Modeling Programs

Initiatives which incorporate the use of role models and mentors for positive adolescent development and avoidance of risk-taking behavior also have emerged in recent years (Tierney and Branch, 1992; Freedman, 1988; Roaf, Tierney, and Hunte, 1994). The premise of these programs is that role models or mentors can positively influence adolescents' life goals, as well as their expectations and aspirations for the future; this may be particularly true for teens who lack models of well-educated, consistently employed adults and committed parents. Role models can have direct effects on risky behaviors by providing examples for teens of positive behaviors and values supportive of abstinence or responsible sexual behavior. Mentors may also demonstrate their influence indirectly by shaping teens' goals for the future, providing evidence by their own life that success is possible, and thus providing an incentive for teens to avoid risky behaviors that may interfere with those goals. In the case of teen pregnancy, a mentor may serve as a model, or represent the type of individual that the teen would like to emulate; mentors can encourage higher education and occupational success, and provide emotional support to promote self-esteem, responsibility, and confidence in the teen's ability to succeed. This person may also stress the importance of avoiding obstacles to goal achievement, such as teen pregnancy.

We found few pregnancy prevention programs that employ solely a mentoring or role model approach. This reflects the tendency of mentoring programs to be incorporated within multi-faceted approaches, addressing multiple risk behaviors among youth including drug use, school dropout, and delinquency, as well as teen pregnancy. Although some of these programs have been evaluated, unfortunately the evaluations are not sufficient to assess the impact of the mentoring component on adolescent sexual behavior. Nonetheless, we briefly highlight some of those initiatives as they offer additional and potentially important approaches to the problem of adolescent pregnancy.

One program that includes a mentoring component is a church-based sex education program (Green and Sollie, 1989) which exposes teens to role models such as psychologists, ministers, medical personnel, and small group leaders. These individuals participated in a panel discussion with youth about sexual issues and life opportunities. Another program, *Teen Outreach*, stresses that the best facilitators for group discussions are those who become mentors to the participants (Philliber and Allen, 1992). Mentors, through their direct involvement with youth, establish a supportive environment based on mutual understanding, confidentiality and trust.

The *Teen STARS* program (Rind, 1992) allows youth participants to make four individual appointments to talk with a group leader about personal problems. Teens have the opportunity to establish contact with other adults whom they may not have known otherwise. Although a modest number of contacts with the mentor are required, the hope is that young people will be able to establish an on-going relationship with this individual and thus obtain an opportunity for a more sustained mentor relationship.

Initiatives to Promote Self-Esteem

A few programs attempt to increase adolescents' self-esteem as a means to preventing early pregnancy. For example, the *Children's Aid Society's Teen Pregnancy Prevention Program* (Carrera and Dempsey, 1988) uses a holistic approach, in which one of its many components is self-esteem enhancement through the performing arts. This component consists of weekly two-hour workshops using music, dance, role-playing, and dramatization to explore issues ranging from conflict resolution to presenting one's self for a job interview. The researchers who designed this program believe that sex for some teenagers is a way of coping with low self-esteem, unhappiness, and little hope for a positive future. They attempt to replace the negative coping response of early sexual behavior with increased opportunity and possibilities, and thus enhanced self-esteem. It is not clear, however, exactly how the program designers envision self-esteem to influence adolescent sexual behavior, e.g., whether they expect increased self-esteem to have a direct effect on the delay of sexual initiation, or whether they hypothesize that higher self-worth will affect the use of contraception or the negotiation of contraceptive use with partners. Future evaluations need to posit the pathways through which the interventions are expected to have impacts, and then examine which if any of these pathways have the hypothesized impacts.

Although a formal experimental evaluation of this program has not been conducted, rates of sexual activity and pregnancy rates among participants have been found to compare favorably with national averages (Carrera and Dempsey, 1994). However, there is no way to know if differences are attributable to the program, to sample selectivity or other environmental factors. In particular, since participation is voluntary, the possibility exists that the results are skewed because motivated teens are the most likely to enter and be involved with the program.

Self-esteem interventions provide an opportunity to illustrate how a strong evaluation design might illuminate our understanding of what factors work for which teens. A rigorous evaluation of a promising teen primary pregnancy prevention program, such as that initiated by the Children's Aid Society, should answer a number of questions. The first question answered would be: Does the self-esteem component actually increase teens' self-esteem? If this is the case, does increased self-esteem lead to early pregnancy prevention? And if it does, through what mechanism does enhanced self-esteem prevent early pregnancy? That is, was sexual initiation delayed, was contraceptive use increased, or was an impact on both sexual activity and contraceptive use observed?

Culturally-Based Initiatives

Another component of pregnancy prevention programs includes culturally-based strategies that address the cultural or normative factors that influence values and attitudes about sex and childbearing. Specifically, culturally-based strategies focus on the importance of a collective sense of self, and the positive sense of history, identity or pride that can come from belonging to a specific ethnic or racial group. The underlying belief is that adolescents who are aware of the positive contributions of their race or their cultural group, and who feel a strong sense of belonging to that cultural group, will also feel better about themselves and thus will be less inclined to engage in risk-taking behaviors, such as early and/or unprotected sex. These approaches employ strategies that are consistent with specific cultural traditions or which further contribute to the awareness of one's culture and sense of cultural pride.

Few programs that we have reviewed explicitly offer a culturally-based intervention, with the exception of the *I Have a Future* initiative (based on Nguzo Saba--see section on Life Options and Opportunity Development Programs), although many employ culturally specific activities (e.g., Kwaanza celebrations, rap music contests) to encourage participation from various youth subgroups. Others employ the use of mentors to address the special concerns and needs of youth from different cultural or ethnic backgrounds as previously described. Still, there are other culturally-based programs that more generally target youth risk-taking behavior in ways that attempt to achieve a positive socialization for youth of color. While these approaches are less well documented, and are rarely evaluated, they are nonetheless innovative and could be useful in the context of pregnancy prevention.

One example of this type of culturally-based strategy for pregnancy prevention is Afrocentric or Rites of Passage programs. Afrocentric programs focus on understanding the contemporary African-American experience as an extension of African history and culture (Asante, 1982; Asante, 1987). Specifically, youth and adults are exposed to African culture, its history, values and traditions, through a series of workshops, specially designed curricula and rituals; participants are taught to incorporate the values of the African tradition into every aspect of their spiritual and physical lives. Youth are taught to respect their elders as people who have contributed to their community's history and thus to the teen's current existence; discussions of spirituality and health, as well as collective responsibility and economic self-sufficiency, are essential components of the program. The goal is to direct the energies and values of African-American youth into a productive and wholesome adulthood.

There are numerous Afrocentric/Rites of Passage programs throughout the country -- the *High Risk Youth* program in St. Louis, Missouri; *A Safe Place* in Atlanta, Georgia; and the *Gilpin Court Housing Community Rites of Passage Program* in Richmond, Virginia -- are a few examples. Complete documentation for these initiatives and any evaluations that may have been conducted have not been located. However, we see these approaches as potentially important strategies which should be explored for their relevance and contribution to pregnancy prevention among high-risk youth.

Community-Based Pregnancy Prevention Initiatives

Several of the interventions targeting contraceptive use among teens include a community-based component linked with school or clinic services. The Annie E. Casey Foundation's *Plain Talk Initiative* (Delgado, 1994) is one example of a community-based, grass roots approach to pregnancy prevention. The *Plain Talk Initiative* is a four-year, five million dollar effort located in six communities in different regions of the country. The program focusses on: 1) improving knowledge and understanding of sexuality issues among adults and youth; and 2) promoting communication between adults and youth about sexuality issues. One of the underlying beliefs of the intervention is that adults play an important role in shaping messages and motivation for reducing sexual risk-taking by adolescents. Yet, since sexuality issues are so rarely discussed in communities, it is quite likely that adults hold many misperceptions as well as misinformation about teen behavior, adult attitudes, and available services. *Plain Talk* is grounded in the belief that change can occur only through a community-wide consensus building effort, which creates an environment in which youth receive clear and consistent messages from the adults and institutions in their lives. Each community identifies a contact agency that works to create a consensus among a broad base of community adults regarding the urgency of teen pregnancy as an issue in their community, and the specific steps that are needed to address it. Three of the six communities have successfully completed their one-year planning process and have moved into the implementation phase of their projects. The evaluation strategy calls for assessments at the community-, organizational-, and individual-level. The long-term goal of Plain Talk is to improve the contraceptive knowledge, attitudes, and practices of sexually active youth -- resulting in fewer teen pregnancies and the reduction in the spread of HIV and other sexually transmitted infections. A baseline survey was conducted among a cross-section of youth, 12 to 18, in three of the six communities. The survey will be repeated with a cross-section of youth toward the end of the implementation phase of the project.

Other community-based approaches to pregnancy prevention also have been implemented. Among them are a series of media and community-outreach campaigns targeting difficult and high-risk youth populations. For instance, the *Man's World Condoms Mailing* (Kirby et al., 1988) initiative targeted males between 16 and 17 years of age living in economically disadvantaged areas across the country. The mailing included a pamphlet called *The Man's World*, which provided facts in a straight-forward manner about sexually transmitted infections, pregnancy and different forms of birth control; an order coupon for free condoms was also included. The goal of the program was to eliminate the embarrassment of buying condoms among young, disadvantaged males. Target males were randomly assigned to an experimental group (received mailing) or the control group. A telephone interview was conducted some five weeks after the initial mailing. Males receiving information demonstrated higher levels of contraceptive knowledge than control males, but no difference in attitudes about contraception in general was observed. Higher levels of perceived benefits to using condoms, however, were noted among participant males; no impact on actual condom use, or use at last intercourse, was found.

Another example of a community-based approach is the *Adolescent Pregnancy Prevention Coalition of North Carolina* (APPCNC), a public-private partnership that assists groups and communities in the organization and implementation of programs which prevent adolescent pregnancy. Local community councils or task forces in North Carolina come together to address issues related to adolescent pregnancy prevention. APPCNC provides them with leadership, technical assistance, and resources to develop the councils, but the councils are independent, autonomous organizations. In 1987, the APPCNC also held the first statewide conference on school-based health care. Through the advocacy, technical assistance, and resources of APPCNC, North Carolina now has 28 adolescent health centers. No formal evaluation of the Coalition has been conducted, but the APPCNC has tracked birth, pregnancy, and abortion rates from 1978 (the first year for which they have reliable data) to 1993. The 1993 pregnancy rate for 15 to 19 year olds has dropped below the 1978 rate, continuing a downward trend since 1990. The 1993 abortion rate for teens in this age group is also lower than the 1978 rate, continuing a downward trend since 1988. The 1993 birth rate continues a downward trend since 1990, although it is still much higher than the low in 1983. Although the Coalition claims success in reducing the pregnancy rate, there is no evidence, based on this rate analysis, that the Coalition, or any of the local interventions, are the cause of this decline. However, a strong statewide coalition and state legislative support for teen pregnancy prevention seems intuitively to be a step in the right direction to reducing adolescent pregnancies.

Programs from other industrialized societies targeting contraceptive behavior among teens provide important lessons and suggestions for strategies in the U.S. While our goal is not to identify or review the full range of international pregnancy prevention efforts, several examples from other countries are worth noting.

The *Swiss STOP-AIDS Campaign* (Hauser and Michaud, 1994)) uses a special strategy -- the *STOP-AIDS Bus* -- which travels to various social events, including music and arts festivals and soccer games. Staff provide information about AIDS and sexually transmitted infections. Contraceptive supplies, particularly condoms, are distributed free of charge. The evaluation is based on a stratified random sample of some 1,400 teens serving as apprentices (those aged 16-19, who upon leaving the school system, engage in professional activity three to four days a week). No assessments of teens' exposure to the AIDS bus or its activities were conducted. Although the authors found a significant increase in regular contraceptive use among males over the study period (1987 to 1990), no change in contraceptive use among females was observed, nor did they find any association with sexual activity. Since there is no comparison or control group in this study, it is unclear whether these findings were due to the *STOP-AIDS Bus* or due to changes over time that would have occurred in the absence of the campaign.

Other countries employ a wide range of media campaigns to promote contraceptive use and government family planning programs, including media campaigns built around a popular television series in Turkey, and the use of soccer heroes and popular musicians to promote condom use in

Zimbabwe (Lancaster, 1994). Although no formal evaluations of these initiatives have been conducted, they indicate ways in which the United States could be more innovative and aggressive in its fight against adolescent pregnancy. For example, in Egypt, family planning messages are disseminated through their popular television soap opera "Doctor's Diary." A recent survey found that 63 percent of men and women of reproductive age recalled the specific family planning messages some three years after it aired; nearly three-quarters of respondents noted they first learned of family planning services by way of television (Lancaster, 1994). Programs that increase information about sex and pregnancy, awareness of pregnancy prevention methods, and access to contraception can be expected to reach teenagers who are already motivated to avoid early parenthood. Indeed, very highly motivated youth can be expected to locate information and services on their own. The hard-to-reach group are those teens who lack strong motivation to delay parenthood (Zabin, 1994a; Moore and Burt, 1982). Quick, low-cost strategies are not likely to be effective among adolescents who are ambivalent, who are only moderately concerned about preventing pregnancy, or whose interest in preventing pregnancy is limited due to other forces in their environment.

Life Options and Opportunity Development Programs

One program aimed at enhancing life options is *I Have a Future* (IHAF; Foster, Greene, and Smith, 1990). This community-based intervention, set in public housing projects in Tennessee, uses a comprehensive set of modules designed to expand life options for high-risk youth ages 10 to 17. The modules, including CHARM (Choosing How to Adorn and Refine Myself), MATURE (Males Adorning, Thinking, and Using Refined Energies), Job Readiness, Youth Entrepreneurial Program, Tutoring/Academic Enrichment, and Recreation, Athletic, and Summer Olympic Activities, are all based on Nguzo Saba, the Seven Principles of Kwaanza. The researchers hypothesize that enhancing life options will reduce teen pregnancy either by increasing the use of contraceptives by sexually active youth, by reducing the frequency of sexual activity, or by delaying sexual activity. Evaluation analyses were conducted at the neighborhood level, comparing outcomes among teens in the participating neighborhoods to teens in comparison neighborhoods. Analyses also compared the active participants to the low level participants within the intervention neighborhood (Greene, Smith, and Peters, 1995).

Preliminary analyses of the IHAF program have found positive effects on intermediate outcomes such as prosocial attitudes, sexual and contraceptive knowledge, self-esteem, perceived life options, and psychosocial maturity, when comparing the active participants to the comparison group. Further analyses are planned to assess the effect of the program on pregnancy rates. (Greene, Smith, and Peters, 1995; Greene, 1995).

Only occasionally are programs explicitly designed to affect the educational and occupational opportunities of children and youth in order to reduce adolescent pregnancy or parenthood. The prime example of such an approach is the *Summer Training and Education Program*, or *STEP*, developed and evaluated by Public/Private Ventures (Grossman and Sipe, 1992). *STEP* combined reading and math education and job training with sex education and decision-making skills, and posited the reduction of teenage parenthood as a primary goal from the beginning of the design phase. More often, programs that provide education, job training, career awareness and summer employment opportunities are designed solely to enhance educational and occupational attainment. Their effects on fertility are rarely, if ever, examined.

However, in the *STEP* program, impacts on fertility were examined. Although increases in knowledge were documented among teens in *STEP* relative to control group teens, no long-term impact on fertility was found. *STEP* targeted a highly disadvantaged population and the lack of impact has been attributed to this high level of disadvantage. Although *STEP* provided services during two summers and to some extent during the intervening school year, it was a relatively short-term program relative to the needs of the adolescents served. [Recent replications extend for as many as four summers.] It may be that even longer-term and more intensive programs are needed for highly disadvantaged youth. Moreover, as noted, the comparison population also received summer jobs; thus, it is not known whether *STEP* would have had impacts compared to a population that received no services and no summer jobs. Any impacts on *STEP* participants represent, of course, outcomes for the experimental group relative to outcomes for youth in the control group. If control youth were affected by the services made available to them, it would be harder to detect any effects of the *STEP* intervention. Several hypotheses exist to explain the lack of impact that was found. Another job training program, The *Youth Incentive Entitlement Employment Program* (YIEPP; Olsen and Farkas, 1990), found that youth who were a part of this program did in fact have lower birth rates than youth in matched comparison groups.

Given that studies of adolescent sexual and fertility behavior consistently find that socioeconomic disadvantage, school-failure, and early behavior problems are consistent predictors of precocious sex, ineffective contraception, and teenage parenthood (see companion volume, Moore, Miller, Glei, and Morrison, 1995), it is surprising that more interventions have not made educational and occupational opportunities the cornerstone of their programs. The lack of emphasis on education and job training as strategies to prevent adolescent pregnancy may reflect the complexity and cost of implementing job training programs that alter the trajectory of disadvantaged and under-achieving youth to a degree that their sexual and fertility behavior are affected.

It is interesting to note that the few educational and job training initiatives with explicit fertility-related goals are programs for teens who are already mothers; such programs seek to delay the occurrence of pregnancies subsequent to the first birth, for example, *Project Redirection*, the *Teenage Parent Demonstration*, *New Chance* and *LEAP* (Bloom, Fellerath, Long and Wood, 1991; Maynard and Rangarajan, 1994; Polit, Quint, Riccio, 1988; Quint, Polit, Bos, and Cave, 1994). These programs are among the best-designed and best-evaluated interventions conducted to date, but none of these programs has been found to have an impact on the rate of subsequent pregnancy, at least in the initial years of the interventions. Programs focussed on disadvantaged teen mothers are clearly targeting a population that is very difficult to serve -- a population that is both sexually active and fecund and whose lives are complex and often disorganized (Musick and Quint, 1994). Yet, since modest to substantial emphasis was placed in these programs on sex education and contraception, many have found it disappointing that no impacts were found on contraceptive use or pregnancy. It will be important to continue examining fertility outcomes over time, as impacts on fertility among this subgroup of teens may not occur until the desired number of children are born. Impacts may be noted, then, on the incidence of third or fourth births.

Interestingly, the one educational program that has shown long-term impacts on early childbearing is the *Perry Pre-School Program*. The evaluation of this program followed into their twenties the children who participated in educational enrichment as pre-schoolers and found that, although the children's early cognitive test score gains disappeared over time, the experimental group continued on a positive educational trajectory (e.g. less grade retention) compared with the comparison group. Moreover, while not an explicit goal of the program, the girls had fewer pregnancies as teenagers (Weikart, 1989).

Thus, despite indications that several programs intended to improve educational and employment prospects for highly disadvantaged teens were not successful in postponing childbearing, several other studies provide hints that such interventions could have long-term impacts on adolescent fertility. To further examine effects of opportunities on teen fertility, evaluation components that examine fertility outcomes could be appended to large and long-term evaluations of educational programs among pre-school, elementary school, and older students. Similarly, evaluations could be appended to evaluations of job training and job creation programs initiated at the individual and at the community level. Such approaches derive directly from research evidence linking school failure and poor occupational prospects with a high risk of adolescent parenthood (see companion volume, Moore, Miller, Glei, and Morrison, 1995).

Life opportunity programs designed to affect the educational and occupational opportunities of children and youth without the explicit goal of reducing adolescent fertility may still have an indirect effect on this outcome. In particular, some programs posit that concrete or actual monetary investments in children may be important incentives for youth to stay in school and avoid risky behavior. Many of these programs presume, for example, that even a modest amount of money (say as little as $500 a year) accumulating in a bank account might convince a young person to stay in school. This could be seen as a small investment compared to the cost of government support if the teen should drop out of school and go on welfare. Such an investment might need to be coupled with other types of interventions, such as support from other adults who give young people enough encouragement and hope that a better future or alternative life options are indeed possible.

One example of this type of program includes the *Quantum Opportunities Program* (QOP)

(Sylvester, 1994). Sponsored by the Ford Foundation, the program targets low-income ninth graders in five communities throughout the U.S. Students in welfare families were randomly assigned to the treatment or the control group. Youth were paid $1.33 an hour for each hour they participated in the program; for each dollar earned by participating, another was placed in an accrual account for college or job training. For every 100 hours they completed, a $100 bonus was added to the youth's account. Teens were required to be neatly dressed and groomed, and to perform community service. Participants received counseling and intensive remedial work in math and English; they were encouraged to read and have discussions with one another about what they had read. Field trips to operas, plays, and restaurants were provided. Each teen is assured that they will have continued support for all four years of high school (Hahn, 1994).

Students in *Quantum Opportunities* completed a baseline questionnaire at the beginning of the program in 1989, and follow-up questionnaires and cognitive testing were conducted each year from 1990 to 1993. After one year of the program, the researchers found no differences between the experimental and control groups. After no apparent impacts, initially, evidence of changed trajectories has begun to accumulate after two years. In addition to completing more education, significantly fewer experimentals became teen parents, 24 percent versus 33 percent of the control group. It is important to note, however, some of the weaknesses of the intervention and of the evaluation study. The sample size for each site is quite small, and in some sites high attrition rates made them yet smaller. Further, in some sites attendance and participation rates dwindled substantially over time. The Philadelphia site appears to have mounted the strongest and most sustained program and to account for the strongest results (Hahn, 1994). Despite these caveats, this program illustrates the intensity and long-term follow-up that is needed for some highly disadvantaged youth. Although a relatively costly intervention at $10,600 per teen, estimates suggest a favorable ratio of tangible social benefits that can offset such costs.

Another program with a monetary incentive approach is the *Dollar-a-Day* program, implemented in North Carolina (Huberman, 1995) and in Colorado (Planned Parenthood of the Rocky Mountains, 1993), among other places. In these programs, small groups of girls meet once a week at neighborhood health centers, community centers or high schools, and they receive $7 a week as long as they are not pregnant. They can continue in the program until they graduate high school, unless they become pregnant. The support group promotes camaraderie and self-esteem, and provides peer support. None of these programs have conducted evaluations, but it is believed that their value lies in the peer group aspect of the program more so than the monetary incentive.

Comprehensive, Multi-Faceted Programs

Many programs are described as comprehensive or multi-faceted because they provide a variety or multiple range of services; however, very few are truly comprehensive. An example of a genuinely comprehensive program is the *Children's Aid Society's Teen Pregnancy Prevention Program* (Carrera and Dempsey, 1988). Implemented in New York City in highly disadvantaged communities, this program provides a wide range of recreational opportunities, including sports such as tennis that require discipline and which can be enjoyed throughout the life span. It also provides education including family life and sex education; medical and health services; mental health services; job club and job awareness activities; and guaranteed admission to Hunter College. This program also provides a strong and caring human component in the mentoring personnel who work very closely and intensively with the adolescents. The original model has been replicated in additional sites, and initial results suggest that adolescents in the replication programs drop out of high school less often than the national average, attend college at rates above the national average, and become pregnant and give birth less often than the national average (Philliber, 1994). These early results are encouraging, but need to be confirmed with experimental methods. The cost of such a comprehensive intervention is, of course, high. However, while some highly disadvantaged adolescents need such intensive interventions, these costly services may not be needed by most adolescents.

Summary and Conclusions

This discussion of pregnancy and childbearing prevention programs indicates that a wide variety of interventions have been developed to address the problem of adolescent sexual behavior. Yet most of these initiatives have not been found to demonstrate significant impacts on adolescent sexual behavior. This lack of demonstrated impact reflects two factors: first, weak and/or ineffective programs, and, second, weak and/or ineffective evaluations.

Sex education that combines information and skill-building is often used as a means to encourage abstinent behavior among teens. Programs which provide only factual information tend to increase knowledge about reproduction and the effectiveness of various contraceptive methods. Though gains in knowledge, however, are frequently short-term, several programs have found knowledge increases to last one or more years. However, programs that emphasize factual information demonstrate modest impacts on attitudes about sex and intentions to avoid sex.

A moderate impact in the direction of delaying sexual initiation is demonstrated among those sex education programs that combine education with skill development, for example, *Postponing Sexual Involvement* and *Reducing the Risk*. Initiatives that are theory-driven, have clear goals, address peer and media influences, employ small group activities, and use peer educators, also appear promising. Community-based initiatives that involve several segments of the adolescent's environment including the school, church, and other community institutions also appear potentially fruitful. However, few of these programs employ random selection of program participants, and the lack of a rigorous evaluation strategy makes it difficult to be sure the program caused impacts and to determine the relative impact of various program components on sexual activity. Future initiatives will need to address issues of selectivity and employ evaluation strategies that tease apart effects of specific intervention components on adolescent sexual activity.

Service-based initiatives include family planning services, abortion services, and adoption placement initiatives. School-based and school-linked services also play a role in pregnancy prevention among adolescents. Only a minority of programs focus on pregnancy resolution decisions, including abortion, marriage, and adoption; we found only one empirical evaluation of a pregnancy resolution program. The general approach is to target contraceptive use among adolescents, to promote the development of skills and resources conducive to effective contraceptive use, and to address barriers to the receipt of contraceptive services. Studies indicate that the provision of contraceptive services is linked with improved contraceptive use, although unique strategies may be needed to adequately and effectively reach younger clients. Family planning services that offer tailored approaches to reduce barriers to receiving care among adolescents appear promising. Specifically, providers who allow teens to extend the initial visit over two clinic visits, offer staff training in adolescent development, and provide more consistent and intensive follow-up regarding return visits, have greater success at attracting younger clients and at achieving higher rates of contraceptive use. However, the relative impact of various service delivery components on contraceptive use or clinic attendance remains unclear.

School-based services have been found to have only limited impact on contraceptive behavior, perhaps because they generally do not offer contraceptive supplies or provide an intensive follow-up and referral system for contraceptive services. However, several programs have found effects on contraceptive knowledge and attitudes. One program that combined education with counseling and access to contraceptive supplies, the *Self Center*, showed effects on contraceptive use and pregnancy rates, in addition to finding evidence of delayed sexual initiation among teens in the *Self Center* school.

Larger community-based initiatives, such as media campaigns, are limited throughout the United States. Examples of existing efforts suggest that these strategies would be helpful for reaching a larger number of difficult-to-reach adolescents. However, a clear understanding of the programs' intended goals and expected impacts would be needed so that a sound evaluation strategy could be developed and implemented. Community support would also be needed in order to gain access to various segments of television, print, and movie industries.

Many other initiatives target the broader social and economic factors that have been shown to influence adolescent sexual behavior, such as life options, self-esteem, or educational attainment. Some programs focus on job training and educational advancement in the hope of helping teens, particularly young parents, to become self-sufficient, and avoid repeat pregnancies. Unfortunately, programs for teens who are already parents have not been found to affect the occurrence of second pregnancies. This is particularly disappointing because at least a moderate emphasis was placed in these programs on sex education and contraception. However, most initiatives of this type are relatively short-term and target highly disadvantaged populations. It may be that extraordinarily intensive or comprehensive approaches are needed for this unique group of teens.

The impact of such initiatives on the prevention of first pregnancies or a first birth is less well understood. Most of these interventions are short-term and have not been rigorously evaluated. Where evaluations have been conducted, it is not clear whether a true impact on adolescent sexual behavior was observed, or which specific aspects of the program are most effective for affecting behavior. One exception is the *Quantum Opportunities Program*, which provided both economic incentives to participate plus rich and sustained social support from ninth grade through the high school years. Initial impacts suggest significant increases in schooling and reductions in early childbearing, suggesting that the substantial investment made has had substantial returns.

Given the plethora of literature on adolescent pregnancy prevention programs, the growth in programs over the past decade, and the modest impact of these initiatives on adolescent sexual behavior, it is increasingly important to critically assess directions for adolescent pregnancy prevention programs in the future. Our review identified several important weaknesses with the current state of pregnancy prevention programs.

First, most initiatives have been developed in isolation from one another and have not benefitted from a knowledge of what has already been attempted and with what results. Unlike the theoretically-based scientific research on adolescent sexual behavior (see companion volume, Moore, Miller, Glei, and Morrison, 1995, for a review), programs, in general, are not developed by carefully building upon the accumulated knowledge base, or with the specific goal of contributing to knowledge or building a literature on pregnancy prevention interventions. That is, initiatives generally are not built upon research studies of prior programs, or even based on accumulated experiences in the field. While providers may be aware of previous initiatives and attempt to incorporate strategies that appear to have been successful, greater consideration about how strategies can be improved or modified to increase the likelihood of success appears warranted.

Second, providers need to think critically about the goals and objectives of their own programs, and delineate the specific impacts they expect to achieve and which components of their programs are most likely to contribute to those results. A clear set of hypotheses outlining how program components will achieve program goals is also necessary.

It appears that most initiatives are based on an implied theory. That is, providers feel they know intuitively what would be helpful for affecting adolescent sexual behavior, but the specific factors contributing to those outcomes, and the mechanisms through which effects should occur, are not explicitly defined or known. A strong theoretical foundation provides for a stronger intervention strategy, because theory should suggest which needs are to be the program focus and should suggest approaches most appropriate to meet those needs. Furthermore, having a theoretical model helps to clarify the best evaluation strategy. We note that in recent years, the number of theory-based sex education and contraceptive service-based programs has begun to increase. These theory-based initiatives tend to demonstrate stronger and more sustained impacts on the transition to first sex and contraceptive use.

Third, solid and rigorous evaluations must be conducted in order to understand the effectiveness of these programs. Providers should identify an evaluation expert early, and involve this individual from the very beginning stages of program development. Sample sizes need to be sufficient to detect impacts and, if possible, researchers should plan for medium to long-term follow-up. Strategies should include a control or comparison group and, where appropriate, should allow for the assessment of the relative impact of program components on adolescent sexual behavior. In the next chapter, we discuss these ideas in greater detail.

III. ALTERNATIVE APPROACHES TO EVALUATING ADOLESCENT PREGNANCY PREVENTION PROGRAMS

Introduction

As highlighted in the previous chapter, despite considerable interest in identifying programs that reduce rates of adolescent pregnancy, it is not currently possible to point to programs that have had large and sustained impacts on adolescent sexual behavior, contraceptive use or pregnancy rates. Such programs may exist, but their effectiveness has not been documented. In fact, only a small number of interventions have been shown to have even a moderate impact on adolescent fertility rates, e.g., the *Self Center, Postponing Sexual Involvement, Reducing the Risk, Teen Outreach*, the *Quantum Opportunities Program*, the *Youth Incentive Entitlement Program*, and the *Perry Pre-School Program*. If these programs were disseminated more broadly, a moderate but real reduction in pregnancy and birth rates might result. To reach the teen pregnancy and birth rates found in other developed nations, though, broad-based, larger, and sustained reductions are needed. The role of the family in reducing adolescent pregnancy is clear from a recent review of the scientific literature (see companion volume, Moore, Miller, Glei, and Morrison, 1995), which suggests that families can, and hopefully will, educate, monitor and guide their own children. Where families can not or do not take on this responsibility, or need additional resources, the role of organized programs becomes critical. Such organized programs are the focus of this chapter. To produce a substantial reduction in the pregnancy rate, a stronger, larger, more long-term, and more coherent intervention strategy is needed than supplied by existing organized programs.

Current interventions suffer from numerous deficits. Few are informed by a theory of adolescent behavior or based on a clear operational model. Rather, programs tend to be pieced together with available funds, hunches, and high hopes. They generally lack a systematic and rigorous evaluation. In addition, compared to the millions of teens at risk, prevention programs tend to be small and short-lived; they reach only a relatively small number of teens in communities across the country, and they end before long-term effects on community norms or expectations have an opportunity to take hold. While it is costly and difficult to implement a large scale, long-term initiative, small localized approaches can only expect to have modest, if any, impacts on state and national rates of adolescent pregnancy. Moreover, short-term interventions hardly have time to work out their intervention strategy, much less revise their approach on the basis of community feedback and initial evaluation results. If sizeable reductions in national levels of adolescent pregnancy and childbearing are to be achieved, a more systematic, thoughtful, and sustained approach to funding, program implementation, and evaluation will need to be undertaken.

Before implementing such large scale or widespread endeavors, however, there is a need to learn more about which initiatives are most promising, their acceptability in varied communities, which aspects of those programs demonstrate the strongest impacts, the capacity of successful interventions to affect behavior across communities that are diverse as to ethnicity and socioeconomic status, which interventions have long-term impacts on pregnancy rates, and eventually the cost-benefit ratio of varied programs. The lack of credible information about which programs are truly successful suggests that the development of programs with a strong theoretical basis and rigorous evaluation designs will be critical in the next decade.

In this chapter we first highlight several theoretical approaches that might be applied to the prevention of adolescent pregnancy. These include behavioral and social learning theories, particularly those that focus on the larger, social context of adolescent development and human behavior. Intervention strategies are considered that move from a unidimensional approach (e.g., education only or communication only) to curricula that explore the impact of combined modalities (e.g., education and counseling; education, and counseling and community outreach). We then discuss evaluation designs that could be implemented to improve our understanding of the effects of pregnancy prevention programs and, thus, better inform policies on adolescent childbearing. Evaluation approaches range from experimental studies, to quasi-experimental studies, to evaluations of natural experiments, to analyses of individual-level (micro) data, to analyses of macro-level (state or county) data. In addition, we offer a number of suggestions for programs that might be implemented and assessed using the respective evaluation approaches.

Theoretical Approaches and Intervention Models

The process leading to adolescent pregnancy and childbearing is extremely complex. The scientific literature identifies numerous factors that contribute to early sexual behavior and decisions about pregnancy resolution (Moore, Miller, Glei, and Morrison, 1995). The factors associated with adolescent sexual behavior include individual-level characteristics, such as achievement in school, risk taking, and personal aspirations, as well as family and macro-level factors, such as family structure, monitoring, communication, values, poverty, and economic and educational opportunities. Pregnancy prevention efforts need to consider the multi-faceted nature of this issue as a first step to identifying an appropriate approach to pregnancy prevention. We are not suggesting, however, that the only way to address pregnancy prevention is through a multi-faceted or comprehensive approach. First, it is not always feasible or cost-effective to conduct a large-scale comprehensive initiative. Not every community will have the resources for such a broad initiative, and not all teens require intensive or an extensive service delivery approach. Second, there is insufficient evidence to suggest that a comprehensive approach is always best. Nonetheless, an understanding of the complex factors that contribute to adolescent sexual and fertility behavior, and the mechanisms through which impacts occur, is critical.

There are numerous behavioral theories that provide a specific context or framework for understanding human behavior. Some of these theories specifically focus on adolescents, while others focus more specifically on reproductive health and family planning behavior[12]. Regardless, all focus on the ways in which individuals interact with social and environmental conditions. That is, they illustrate how various interpersonal and environmental situations lead to the likelihood of behaviors. For instance, the social and cognitive skills prevention model (Gilchrist and Schinke, 1983) asserts that for behavior to change, individuals need specific cognitive and social skills to resist pressures and to negotiate interpersonal encounters successfully. Thus, individuals must both have sufficient knowledge and understanding of the problem, and also have the skills and capacity when confronted with the situation to act on that knowledge.

Social Learning Theory (Bandura, 1977, 1986) posits that the likelihood of an individual engaging in or avoiding some type of behavior (e.g., sexual intercourse) is first determined by the individual's understanding of the association of the behavior with a particular outcome (i.e., understanding that having sex without using contraception will lead to pregnancy). Next, the individual must believe that he/she has the capacity (e.g.., self-efficacy) to engage in or avoid the behavior, and that the specific technique (e.g., abstinence or contraception) for avoiding the outcome

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[12] Although a broad range of behavioral theories exist, only a select number of relevant theories are described in this chapter.

(e.g., pregnancy) will be effective. Finally, the individual must believe there is a benefit to avoiding the outcome (e.g., postponing childbearing has benefits). Individuals develop their specific attitudes and feelings about these behaviors by observing the behavior of others, by observing the rewards and punishments the behavior elicits, and then, through practice, by developing the necessary skills required to behave in accordance with beliefs.

Several other theoretical models of behavior are based on individuals' attitudes and perceptions about the costs and benefits of engaging in preventive behavior. One example is the Health Belief Model, a well-known value-expectancy psychological model that focusses on primary prevention of various health outcomes (Janz and Becker, 1984; Rosenstock, Strecher, and Becker, 1988). The underlying premise of the Health Belief Model is that the probability that an individual will perform a particular preventive action (e.g., use contraception) is dependent upon a number of personal perceptions. These include: 1) his/her perceived susceptibility to the outcome (e.g., likelihood of getting pregnant or causing a partner to become pregnant); 2) his/her perceived seriousness of developing or experiencing the outcome (e.g, seriousness of the negative personal consequences of getting pregnant or impregnating a partner); and 3) the perceived benefits minus the perceived costs or barriers to performing the preventive action (e.g., benefits of using contraception, avoiding pregnancy, relative to the potential costs of or barriers to using contraception, such as side effects or lack of access to contraception). According to the Health Belief Model, individuals consider each of these four criteria before engaging in any type of preventive behavior. Thus, the likelihood of an individual performing the preventive behavior is increased only when the individual's perceived susceptibility to the problem is high, the perceived seriousness is high, and the perceived benefits outweigh the costs of undertaking the preventive action.

Another approach that emphasizes individual perceptions in adolescent sexual decision-making is the Theory of Reasoned Action (Fishbein and Ajzen, 1975; Fishbein, 1980). This theory states that individuals engage in various behaviors because they intend to do so. Such behavioral intentions are in turned influenced by: 1) the individual's beliefs about the outcome of the specific action (e.g., abstinence will avoid pregnancy); 2) an evaluation of the specific outcomes, (e.g., avoiding pregnancy is a good thing to do); 3) the individual's perception of what others think about the action (e.g., parents are supportive of abstinence, peers are not supportive of abstinence); and 4) the individual's motivation to comply with the opinions of others. Previous research indicates that behavioral intentions correlate with actual behaviors in a wide variety of settings, from donating blood to voting to using family planning services (Ajzen and Fishbein, 1980). The theory does not presume that the beliefs held by individuals are rational or logical, only that these beliefs are what in fact motivate behavior.

Two additional theoretical approaches to adolescent pregnancy and childbearing -- the culture of poverty and opportunity cost perspectives-- presume that adolescent fertility-related behavior is influenced by the individual's assessment of the costs and benefits, or the maximum utility derived from engaging in or avoiding the specific behavior. The culture of poverty perspective (Lewis, 1959, 1961, 1966) argues that early adolescent sexual and fertility-related behavior is "both an adaptation and a reaction of the poor to their marginal position in society" (Lewis, 1968, p.188). Over time such behaviors become normative within various segments of society and get passed on from generation to generation.

Others have continued to use the culture of poverty perspective to explain structural conditions of society, such as increases in the rates of out-of-wedlock births, female-headed families and welfare dependency (Moynihan, 1965). Individuals, particularly youth, are aware of the lack of opportunities available to them, and the culture of poverty perspective argues that individuals faced with limited opportunities, crime ridden neighborhoods, and poor living conditions often reject the behavioral norms of the larger society, and adopt alternative patterns of work, marriage, and sexual activity more consistent with their way of life as they are outside the mainstream (Murray, 1984; Morrison, Blumenthal, Krysan, Sugland, and Zill, 1992). Murray (1984) argues that welfare programs, specifically, have rewarded irresponsibility; thus, over time, reliance on welfare as a form of support has come to be tolerated or even encouraged as patterns of dependency and non-marital childbearing pass from one generation to the next.

The culture of poverty perspective has been criticized by many who argue that alternative norms for behavior are a result of structural factors and inequality, such as limited social and economic opportunities, segregation, and external obstacles to advancement (Steinberg, 1981). Wilson (1987) has asserted that a shift in the U.S. economy has resulted in a decline of industrial jobs in urban centers and an emigration of higher income families from the cities, making it difficult to sustain important social institutions such as schools and churches. These social institutions have historically provided sanctions against behavior outside of the mainstream. Their absence has left an opening for other influences to shift norms toward early, non-marital childbearing.

The opportunity cost perspective presumes that young women view themselves as having nothing to lose by putting themselves at risk for an early, or non-marital birth (Moore, Simms, and Betsey, 1984). Thus, some disadvantaged adolescents evaluate their existing options for future schooling, work, marriage, and economic attainment, and opt for early childbearing, because opportunities for school, work, or economic stability are minimal at best and not jeopardized by an early birth. Furthermore, having a child would bring greater utility or satisfaction than the effort to secure additional school, work, or economic stability. More advantaged adolescents, on the other hand, see early childbearing as a hindrance to their educational, occupational and, perhaps, marital goals, and therefore avoid early parenthood.

A utility maximization theoretical perspective underlies many explanations of teenage childbearing. According to the utility maximization perspective, young women and men assess the varied costs and benefits of sex, pregnancy and parenthood and behave in a way that maximizes their own personal utility. For example, Geronimus (1987) argues that teenage childbearing among poor black women in the U.S. may be "strategically timed." Since they can generally neither afford to take time out of the labor force, nor afford the cost of child care when they have children in their twenties, poor black women:

> may find that the only time they can invest in infant care is during their teens, which, for them is often an enforced retirement from the labor force, or the lowest paying period of their working lives. In addition to having time to care for their infants during their teens, these young mothers will also have other caretakers available because they are likely to continue to reside in their families of origin and are still living under the care and protection of their own mothers (Geronimus, 1987:15-16).

Other theories take a broader approach to health behavior. Kar (1977) posits that four categories of factors influence contraceptive use. These include: 1) sociocultural determinants of health behavior, including social norms, interpersonal influences and communication; 2) situational influences, including knowledge or awareness of services, costs and access to care; 3) sociopsychological determinants, which include behavioral intentions, personal aspirations, values and prior experience with health services; and 4) sociostructural determinants, such as social and economic opportunities. The model posits that when all four categories are favorable toward the behavior (e.g., contraceptive use), the behavior will occur. When any one of the factors is in conflict with the other, the behavior is less likely, and will depend upon the strength of that particular factor for that individual and his/her community. For example, categories 2 through 4 may be present and supportive of using family planning services. However, if social norms do not support contraceptive use, or there is limited communication about contraceptive behavior among individuals for whom sociocultural influences against contraception are strong, use of contraception will be less likely to occur.

The above discussion highlights selected behavioral theories as a means for understanding the various ways in which individuals' actions are influenced by their social environment. Research has not progressed to the point where a specific theory can be recommended. However, those paradigms that take a broader ecological perspective (Bronfenbrenner, 1979; Kar, 1977) may be more realistic about the life situations of contemporary adolescents, and thus more helpful when moving into an applied or program setting. On the other hand, these theories imply more multi-faceted or comprehensive approaches, which generally are more difficult and costly to implement. Furthermore, it is not clear whether these approaches are entirely appropriate for all populations of teens, particularly disadvantaged or ethnic minority youth, immigrants, and younger adolescents. By that we mean that the majority of these theories have been developed within a mainstream, European- American context, and may not be easily adapted to more diverse settings. Nonetheless, they can be used as a foundation from which to develop theoretical approaches that are more appropriate for various groups of teens.

In those instances where existing theories seem inappropriate or where communities do not have the resources to explore various theoretical approaches to behavior, they can and should, nevertheless, have a clear and explicit model of how and why their program will affect adolescent sexual and fertility behavior. For example, even when programs are based upon prior experiences with youth, or upon intuition about what youth might need, providers still need to outline a model to guide their intervention. For example, if mentoring and social support are selected as focal components of a program, then it must be determined what it is about these two components that will influence adolescent behavior. For instance, providers may feel that youth in their community have no one in their lives whom they can talk to, or who will listen to them, provide guidance, or simply to do positive and productive things with them, and this lack places them at risk of early sexual activity and pregnancy. It is believed, therefore, that providing mentors and social support will reduce early sexual behavior and early pregnancy. The program would therefore attempt to act as a buffer between negative social environments and the youth by offering positive and productive activities in a warm and supportive environment.

One of the many values of grounding intervention programs in theory, or developing interventions that at least have a delineated model and hypotheses, is that they naturally lead to clearly defined intervention strategies. That is, when researchers understand or have a model of the determinants of adolescent fertility behavior, and a model of the mechanisms that might affect that behavior, it becomes relatively straightforward to determine an appropriate intervention strategy. For example, the Cognitive Behavioral approach, as previously described, suggests that individuals need specific cognitive and social skills to resist pressures and to negotiate interpersonal encounters successfully. Therefore, individuals must not only have sufficient knowledge and understanding of the problem, but also the capacity to act on the knowledge they have acquired. Thus, the Cognitive

Behavioral approach to pregnancy prevention warrants activities that provide information about sexuality, reproduction, and contraception; training in decision-making and assertive communication skills; and practice in applying those skills in personally difficult settings or situations. An appropriate intervention strategy might include an education or factual information component, a skill-building component, and a role-playing component.

Programs based on Social Learning Theory would also include the provision of factual information and practice sessions on how to avoid behaviors through role playing. In addition, approaches based on this theory would include modeling of socially desirable behaviors by teachers or peers, and illustrations of ways to successfully avoid unprotected intercourse without the loss of a close relationship. These two additional components address the benefits of risk-avoidance behaviors, an integral part of the Social Learning model.

Taking a broader sociocultural approach to pregnancy prevention, as with Kar's model, would require community involvement; identifying the norms and values of that community; promoting availability of and access to contraceptive services; improving teens' attitudes about contraception and aspirations; and promoting economic and social opportunities. This type of approach would call for a multi-faceted or comprehensive pregnancy prevention program. An intervention based on an opportunity cost perspective would identify concrete ways to substantially improve adolescents' educational and occupational opportunities.

With most approaches, it is clear that more than one program component would be needed to satisfy the tenets of the theoretical model. Programs focussing solely on one component can be helpful, however, in expanding our knowledge base regarding the effectiveness of specific intervention modalities. For example, if the goal of the program is to promote communication between parents and adolescents, then a program that contrasts several different approaches to achieving that goal (e.g., video and printed materials, versus panel and group discussions, versus role playing with parents and adolescents) would be particularly helpful. Similarly, programs might systematically vary specific family planning strategies to explore the relative utility of various ways in which services can be delivered to adolescents.

Other approaches could employ multi-service strategies. That is, two or three quite different factors contributing to adolescent sexual behavior could be addressed simultaneously. For example, the development of communication skills, access to contraceptive services, and the use of role models could be combined in one program. Alternatively, job training and apprenticeship activities could be combined with contraceptive services and a mentoring program. Programs must be designed in a way, however, that allows researchers to determine the relative impact of each component. The ideal evaluation design is one in which a control group receives no intervention, the first experimental group receives one component, and the second experimental group receives two components, thereby allowing assessment of the relative impact of each component. However, this is not always possible. Thus, in those instances where communities are uncomfortable denying services to the comparison group or control group, the comparison group of youth could receive a minimum service approach (e.g., contraceptive services), the intervention group could receive the expanded intervention (e.g., contraceptive services plus mentoring). Developing approaches that allow for a better understanding of the relative impact of these components to adolescent sexual behavior will be critical. It will also set the stage for a sound and more rigorous approach to evaluation.

Evaluation Approaches

Given limited funding for services and programs, it is increasingly necessary to assess the effectiveness of intervention programs that are implemented, both to be assured that the effort has the intended impacts without having unintended consequences and to demonstrate effectiveness to funders. In addition, policy makers and service providers in other places may desire evidence as to the effectiveness of the intervention in order to decide whether or not to implement the program in their area. Some program providers and funders will be satisfied to know that services are being delivered to the target audience, or that it is feasible to field a particular approach such as sex education. More and more, however, funders and policy makers want to know whether their intervention is having the intended impact. Does a given intervention reduce the incidence of adolescent pregnancy? This question of impacts is the focus of our discussion. Rigorous evaluation research is needed to provide credible information about what works. This chapter discusses how we can identify interventions that have impacts on the incidence of adolescent pregnancy.

There is no shortage of opinions as to what will reduce adolescent pregnancy, nor is there a shortage of program models or model programs. What is in short supply, however, is objective, empirical evidence identifying programs and policies that reduce pregnancy and childbearing among teenagers, the components of the program or policy that are effective, and the populations among whom particular approaches have impacts.

In this section, we describe several types of evaluations that could be conducted to assess the effects of programs and policies. These range from experimental studies, to quasi-experimental studies, to evaluations of natural experiments, to analyses of micro-level individual data, to analyses of macro-level data where the unit of observation is the county, state, or zip code.

The preferred evaluation approach employs experimental methods. The use of other non-experimental designs, as well as non-experimental statistical methods that control for selection into program participation, is often useful (e.g., Hotz, 1990). We will both discuss several non-experimental approaches and suggest a number of non-experimental studies that might be implemented. However, compared with experimental studies, no other evaluation strategy is equally conclusive in determining the causal impacts of an intervention (Miller, Card, Paikoff, and Peterson, 1992). Thus, we encourage policy makers, program planners, and evaluators to work together to design, fund, conduct, and assess experimental evaluations of interventions, specifically evaluations in which there is a randomly assigned experimental group which receives the treatment and a randomly assigned control group. Although experimental studies are expensive, the relative value of experimental studies is so great that it is better to conduct a small number of rigorous experimental studies than a large number of non-experimental studies.

We also suggest a variety of experimental approaches that have been or could be used to study adolescent sexual and fertility behavior, and point out a number of issues that should be addressed in experimental studies. Having noted the critical difference between experimental evaluations and all other types of evaluations, we also recognize that some issues cannot be studied using experimental methods. Random assignment may not be feasible for ethical or practical reasons, or random assignment may be too costly to implement, so other approaches must be used. We describe these approaches as well, and again discuss a number of studies that have been or could be conducted using quasi- and non-experimental methods.

Necessary Steps in Every Evaluation

Whatever the nature of the problem being addressed, the intervention being developed, the population served, or the services offered, a certain set of initial steps are fundamental and essential (Card, Peterson, and Greeno, 1992; Philliber, 1989b; Rossi and Freeman, 1989).

First, every evaluation study needs to define the purpose of the intervention. What is the problem that is to be addressed by the intervention? Is the purpose of a given intervention to delay the onset of sexual intercourse, to increase contraceptive use, to encourage adolescents to engage in thoughtful and considered decision-making, or to reduce the incidence of childbearing? Program designers need to think through what they want to accomplish and obtain consensus among those implementing and funding the program regarding the purpose of the endeavor (Card, Peterson, and Greeno, 1992). Ideally, such a purpose will be expressed as a directional hypothesis, such as, "the implementation of this program will cause students to delay initiating sexual intercourse." In addition, program designers should have a model guiding their efforts. It is not enough to say, for example, that creation of a program will lower the birth rate. Planners should be able to specify how the program will achieve this goal. Thus, a sex education program may be hypothesized to delay timing of sexual activity and thus prevent pregnancy. Alternatively, a sex education program may teach teenagers how to obtain, use, and pay for contraception in order to reduce the odds of pregnancy. These are quite different models. Program planners should specify clearly how and why the program they are designing is expected to work.

Second, all evaluation studies need to express their overall purpose in the form of clear and attainable goals. The goals need to be specified in a way that is concrete and measurable. For example, a goal of "encouraging responsible parenthood" is very nebulous and unspecific compared with the goal set for the U.S. in *Healthy People 2000* of reducing pregnancies among girls aged 17 and younger to no more than 50 per 1,000 adolescents by the year 2000 (Public Health Service, 1990). In addition, the goals that are set need to be reasonable and feasible. For example, implementation of a sex education program that serves the tenth grade class in only one of four high schools in a city cannot be expected to cause a decline in the city-wide birth rate. A more reasonable goal might be to reduce the incidence of unprotected sex in the program high school after implementation of the program. Service providers complain that the expectations for programs targeted at adolescent pregnancy prevention are unrealistically high compared to other kinds of programs; the value of driver's education in a high school, for example, is not assessed by examining area-wide accident rates. However, overly high expectations are often encouraged by program developers themselves when they fail to set realistic goals. One lesson that can be distilled from the research to date is that expectations for program impacts should be modest.

Third, the target population needs to be clearly identified. Who are the intended participants, patients, or clients? Is an abstinence intervention expected to encourage virgins to delay sexual activity, or is the program also intended to encourage non-virgins to stop having sex? Is a family planning intervention going to serve females only, or will the target population also include males?

Fourth, the nature of the treatment, including the amount and frequency of the intervention, needs to be specified. Will family life education, for example, be provided to parent/child pairs once a week for two hours over an eight-week period, or will a single lecture for parents constitute the intervention?

Fifth, a process needs to be put into place to confirm that the services were delivered. This may be a management information system, for example, that keeps track of the number of clients served and the services they received, or a clinic attendance system that simply tracks how many family planning appointments were kept. To be useful, such a data system should be computerized, and a common identifier number should be used for each client each time data are collected.

Sixth, the duration of time that participants and controls will be followed must be decided. Is it expected that changes will be apparent rather quickly, or only after some time has passed? How long do changes need to be maintained to be able to say the program was a success? How long can subjects reasonably be tracked without losing so many cases that the study results are undermined? What are the cost implications of a brief, medium, or lengthy follow-up period?

Seventh, study designers need to collaborate with program providers to confirm that the intervention is correctly implemented and that accurate data are collected. A period of time needs to be allowed to permit programs to establish procedures and train staff. Care needs to be taken to ensure that all subjects are assigned to the correct treatment group and that the intended differences between treatments and controls/comparisons are put in place and maintained in place. It is easy for treatments to lose their uniqueness over time and for controls to drift into the treatment groups; it is necessary to monitor programs to avoid this contamination of the design. In addition, it is necessary to pre-test data collection instruments, to confirm that measures are valid and reliable and that staff members involved in data collection received careful training in collecting data, whether by administering questionnaires, interviewing clients, or maintaining accurate case records. It is essential to monitor program implementation and data collection over time, to confirm that the procedures put into place at the outset of the study continue over time.

Finally, every study needs to have some kind of control group or comparison population. All too often, project evaluations simply report the proportion of their service population who did not have sex, who used contraception, who communicated effectively, or who did not have a birth, without providing any indication as to whether that outcome represents an improvement over what might have occurred without the program. Knowing what would have happened in the absence of the program or policy change is the greatest challenge to intervention research. We know from numerous studies that the likelihood that an adolescent will have sex, use contraception, become pregnant, or have a birth varies tremendously across teens. Similarly, the likelihood of participation in programs varies across teens. Only by standardizing the likelihood of participation (e.g., with a treatment and control group) can program effects be identified.

In subsequent sections, we outline a variety of evaluation strategies, beginning with experimental designs. The value of conducting an experimental study over conducting any other kind of study, for the purpose of program evaluation, cannot be overstated. Having acknowledged this fact, it must also be recognized that it is not always possible to conduct experimental studies. Therefore, we also describe several other approaches that can shed light on the effectiveness of policies and programs intended to reduce the incidence of teenage childbearing.

Experimental Studies

An experimental design is preferred because this is the only evaluation strategy that has the capacity to definitively establish the effectiveness of the intervention. In non-experimental studies, many factors tend to distinguish those persons who volunteer to participate or who choose to participate more intensively in a given intervention. For example, they may have greater needs which impel them to participate. They may have stronger motivation to change their lives. They may have more ability or more supports that enable them to participate. Alternatively, they may face fewer barriers to participation, such as family opposition. Because these kinds of differences are confounded with voluntary participation in any program, it is impossible to disentangle the effects of an intervention from the characteristics of the persons who volunteer and participate. In an experimental study, however, there are two ways to minimize selection bias into the study and thereby form treatment and control groups which contain persons or groups of persons who are comparable in their characteristics. One way is to randomly select subjects into participation in the study and then further randomly assign each subject to a treatment or control group. The second way is to randomly assign people into treatment and non-treatment (control) groups, regardless of how they were selected into the study (i.e., voluntary participation). The purpose of random assignment is to create groups that are equivalent before one (or more) of the groups receive an intervention.

Various types of experimental studies are possible. Individuals can be randomly assigned to treatment and control groups. Alternatively, families or classrooms can be randomly assigned to treatment or control groups. In addition, studies of adolescent sexual and fertility behavior can not only be developed, funded, and conducted for their own sake, they can also be added onto other studies. For example, an experimental study of educational enrichment designed to examine the impact of special year-round tutoring and mentoring on the school success of a large sample of teenagers might also examine the impact of this program on whether adolescents initiate sex or avoid parenthood. It is very difficult to design an experimental study by randomly assigning larger organizational units, such as schools, or geographic communities such as neighborhoods, counties, or towns (e.g., too few cases). Therefore, we discuss these approaches under quasi-experimental designs.

Possible Studies Involving Random Assignment of Individuals

Most interventions designed to affect the sexual and fertility behaviors of adolescents focus on the individual as a thinker, actor, or decision-maker. For example, educational programs focus on informing individuals; goal-setting, self-esteem, and motivational programs direct their messages at individuals; and contraceptive programs provide services to individuals. Therefore, random assignment of individuals to groups that do or do not receive a given intervention represents an appropriate evaluation strategy for many varied types of interventions.

The research literature summarized in the companion volume by Moore, Miller, Glei, and Morrison (1995) indicates that school failure is one of the strongest risk factors for early sexual initiation and adolescent parenthood. Thus, it may be hypothesized that programs that serve to improve academic performance may also serve to prevent adolescent pregnancy. Accordingly, students who are behind grade and/or achieving poorly in school represent an important target group for programs to delay sex and prevent pregnancy. Programs to enhance academic achievement are less controversial than programs to provide sex education and contraception, but may be equally or even more important to the prevention of adolescent pregnancy. The *STEP* evaluation conducted by Public/Private Ventures suggests that long-term interventions are needed for disadvantaged populations. Thus, experimental studies should be implemented that provide assistance for four or five years or longer. In addition, data indicate that many junior high and middle school students who are failing in school are at risk of initiating sex, indicating the need for programs that begin in the latter years of elementary school at the latest. The lower rates of teen childbearing found for teens who had participated in the *Perry Pre-School* program suggest that very early education interventions may be quite effective. Samples of children who are randomly assigned into early childhood programs might be followed into adolescence to assess impacts on early sexual and fertility behavior. Alternatively, children might be randomly assigned to intensive after-school and summer tutoring programs. The availability of volunteer tutors and mentors, especially for long-term programs, generally falls short of the need. Thus, randomly assigning children having academic difficulties to available volunteers represents an ethical way to distribute scarce resources. Studies could examine both educational and fertility impacts.

Available research also consistently identifies adolescents with various behavior problems and youth who engage in risk-taking activity such as substance abuse as more likely to engage in unprotected sex (see companion volume, Moore, Miller, Glei, and Morrison, 1995). Programs that target such adolescents with positive and supportive attention, monitoring, education, and other services to address their behavior problems are, if effective, likely to lower the risk of early and unprotected sexual activity as well. Programs designed to reduce drug abuse, for example, tend to be less controversial than programs that focus on sex; yet, programs that are effective in reducing drug use may also lead to reductions in sexual risk-taking. Thus, it makes sense to add evaluations of sexual and fertility behavior onto experimental evaluations of programs designed to reduce risk-taking, regardless of whether or not the intervention focusses specifically on sexual risk-taking.

To explore the widely held hypothesis that many teens who engage in risky behaviors do so for lack of more positive ways to spend their time, an experimental study could be conducted in which an array of interesting, fun, engaging, developmentally appropriate and meaningful opportunities are provided to adolescents who otherwise would not have such opportunities available to them. Adolescents who apply to participate in special activities such as sports teams could be randomly assigned to experimental and control groups. Experimental groups could be provided with specific special opportunities, such as a year-long schedule of activities and trips, sustained interaction with coaches or mentors, plus education and discussion directed at encouraging abstinence and contraceptive use. The control group might be eligible for some gift, such as occasional passes to a movie or a sports event, to facilitate tracking for follow-up purposes. As discussed above, results from a myriad of short-term interventions indicate that short-term programs produce short-term impacts. Hence, fertility impacts should only be expected after a year or more of program intervention.

The availability of information about sex and contraception, as well as contraceptive supplies, can be addressed by private doctors as well as clinics. Pediatricians in a group practice or HMO might be randomly assigned to receive special education and training to enable them to initiate discussions about sex, contraception, and pregnancy with adolescent patients. Control group doctors would receive no special training. Medical records of patients could be analyzed to assess whether the training affected rates of pregnancy and sexually transmitted infections.

Although results from school-based clinics have tended to be disappointing, this may reflect a need to refine, intensify, or otherwise change the approach. The effects of such variation should be rigorously assessed. For example, schools with school-based clinics might randomly select a sub-sample of students to receive special intensive outreach, education, counseling, and follow-up services. Family planning services and/or special education and counseling with parents or partners might be attempted. The control group would have access to the usual, less-intensive array of services provided by the school-based clinic.

Norplant® is costly and difficult to provide free of charge to women interested in receiving it. A reasonable way to allocate limited supplies is to randomly choose the patients who will receive the scarce resources. Thus, among clinic patients seeking Norplant®, some could be randomly selected to receive Norplant®; control subjects could be provided with their second choice method. Outcomes such as method satisfaction, the incidence of discontinuation, the occurrence of pregnancy, and the occurrence of sexually transmitted infections could be tracked over time. In addition, teens could be randomly assigned to receive varied levels of education, counseling, and follow-up, or to pay randomly assigned prices for birth control supplies. (If random assignment of individual patients seems too difficult or controversial to implement, it is also feasible, though less rigorous, to randomly assign clinics. This option is discussed under quasi-experimental designs.)

Studies Involving Random Assignment of Families

Families are the most fundamental and universal forms of human organization. They also are the primary group concerned with the socialization of children. Consequently, families represent a natural unit on which to focus interventions. Evaluations of family-oriented programs to date have been minimal. One well-implemented evaluation of a family-based sex education program (Miller et al., 1993) was conducted among volunteer Utah families with seventh graders, where the incidence of sexual activity was too low to identify impacts. Studies need to target more high-risk samples, such as families in which an older sibling has already had a child, or caused a pregnancy, or families whose child has academic or behavior problems.

Varied types of interventions could be focussed on families. As yet, the specific elements of programs most effective for families are not clear, although a wealth of studies indicates that a combination of unconditional love, firm control, and reasoned verbal explanations characterize positive parenting strategies (National Commission on Children, 1991; Baumrind, 1982). Numerous parenting curricula are available. Approaches that emphasize communication skills, accurate information for parents, and training in effective discipline and parental monitoring seem to represent important family issues on which to focus. Thus, programs might provide parents with accurate information about sexually transmitted infections, pregnancy risks, and contraception. Then, in addition, the program might help parents improve their communication skills to enable parents and adolescents to have more productive conversations about sex. Programs might help parents identify positive activities, such as sports, theater, and employment, to occupy their children. Also, programs might assist parents in developing and role playing more effective strategies of monitoring and discipline. Alternatively, programs might focus on a variety of these strategies at the same time.

The design of programs for families could also vary substantially, and current research does not provide evidence that there is one best approach. For example, programs might work with adolescents and parents together or separately. They might provide time for discussion in small groups, or families might meet with a counselor individually. The auspices of family-oriented programs might range from religious settings to the juvenile justice system. Some emphasis might be given to developing programs suitable for children in foster care, detention centers, and other institutional settings, given some evidence that these children are at relatively high risk of sexual activity and pregnancy (e.g., Polit, Morton, and White, 1989). The details of the curricula should vary with the characteristics and needs of the families. For example, a program for families with pre-teens would be quite different from a program for families with high school students. In addition, programs in varied regions and varied cultural groups need to respect the values and preferences of the community in which the program is provided.

Although available research provides minimal guidance regarding best practices, several program characteristics are promising. Where appropriate, programs which include discussions of both abstinence and contraception are likely to be more effective. Several studies (reviewed in Kirby et al., 1994) indicate that approaches that combine abstinence education with contraception education are more effective in delaying sex and in encouraging contraception than programs that focus on either topic alone. Also, planners should not assume that a couple of sessions over a period of a month or two will have much impact, because existing evaluations have shown that short-term interventions are not particularly helpful.

Randomly assigning families to experimental and control groups can be accomplished if there are more families eligible for a program than can be served, or if there is a large enough group of families available to support random assignment for some other reason, such as a court order. Increasing the number of volunteer families can be facilitated by lowering barriers (e.g., providing child care for younger children, selecting convenient locations and hours), by making the program very attractive (e.g., by providing refreshments or inviting a local celebrity to a kick-off meeting), or by providing incentives (e.g., prizes, a lottery, gifts, or direct payments). Families mandated to participate in such a program might include parents with children declared by a court to be incorrigible, those whose children have been neglected or abused, or those whose children are in foster care or juvenile detention. Families randomly assigned to the control group might be deferred to take the program at a later date, assigned to a different activity, or provided with a gift. It is important to maintain the good will of this group, of course, since impact data need to be obtained from the control group as well as from the treatment group.

The number of families that need to be recruited can be estimated by conducting power analyses, which are discussed below. If, as is common, there are not enough cases in one site to meet the requirements for statistical power, data from multiple sites can be merged as long as the implementation of the program and data collection procedures are standard across sites.

Family-focussed interventions generally focus on abstinence, but they could also serve families with teens who are sexually active. Moreover, among families with pregnant adolescents, they could address pregnancy resolution. Studies that address contraceptive use as the outcome of interest might focus on samples comprised entirely of families with sexually active adolescents. For example, the families of teenagers who made appointments at a clinic for family planning services, or teenagers having a negative pregnancy test (Zabin, 1994b) could be randomly assigned. Similarly, studies could randomly assign the families of pregnant adolescents to standard and enhanced programs to assess the value of a counseling, education, or communication approach on decision-making about pregnancy resolution.

Potential family-oriented interventions, then, include a variety of possibilities for experimental studies. For example, based on studies of the factors that predict early childbearing, at-risk populations can be identified as adolescents who are experiencing academic failure and students with serious behavior problems (Moore, Miller, Glei, and Morrison, 1995). This research suggests that a potential target population for pregnancy prevention activities might include families of adolescents, or even children with chronic behavior problems in school and families whose children are experiencing serious academic problems. Eligible families might be randomly assigned to receive sustained special services, including family counseling and parenting classes, to address the problems of the youth in the school setting, and to assist the family in addressing the problems of the youth as well. Impacts might be assessed for academic and behavior problems, as well as sexual and fertility behaviors.

Family-based interventions are often directed at families with young children, for example, *Even Start* (St. Pierre, et al., 1993) and the *Comprehensive Child Development Program* (St. Pierre et al., 1994). Such ongoing studies of children in pre-school, children making the transition from pre-school into kindergarten, and children in elementary school tend to focus on early childhood outcomes such as behavior problems, academic progress including math and reading skills, peer relationships, and work habits. If impacts are found on these outcomes in elementary school, then it would be useful to extend the follow-up period into adolescence to assess whether these interventions affect early sexual behaviors, such as intercourse, contraception and pregnancy.

Family-based experimental studies need not be limited to families that are already experiencing difficulties. Parents whose children are in elementary school, middle school, and junior high might be offered an opportunity to participate in intensive parenting education, to form an ongoing parents' group, or to be a part of a parent-child group that provides opportunities for education, activities, and discussion. However, such an intervention cannot be expected to have large or lasting impacts unless it is ongoing for a significant period of time. How long programs need to be provided is not yet known and can be addressed as results from evaluations of varied programs accumulate. Experienced youth development programs, such as the Scouts, provide a graduated series of activities for children and families throughout childhood and adolescence, and may represent the kind of long-term opportunities needed to provide real alternatives to early parenthood.

Although some states may not have the capacity to identify families receiving Aid to Families with Dependent Children (AFDC) that include adolescents, many welfare offices are developing computerized caseload record systems that include information about household composition. Welfare offices that have this capacity could identify adolescents in families that receive AFDC but who are not themselves already parents. These households could then be randomly assigned to be in the experimental or the control group. The experimental group could receive an array of special services such as tutoring, assertiveness training, summer employment, mentoring, sex education, referral for contraception, family counseling, rites of passage groups, and job preparation. Impact information regarding sexual, contraceptive, fertility, and marriage behavior and attitudes could be obtained from surveys conducted with the experimental and control group. (Since abortion is under-reported in survey data, studies of pregnancy resolution with survey data are not recommended.) Because families on AFDC receive Medicaid, even for a transitional period after leaving AFDC, this sampling strategy provides a unique opportunity to utilize Medicaid records to examine whether or not a birth occurred.

Power Analyses

In the course of planning experimental evaluations, it is necessary to conduct power analyses during the design phase to ensure that the proposed research can detect whether policy relevant program impacts occur. Power analyses allow the researcher to determine the sample size necessary to detect program impacts of a given magnitude on predetermined outcome measures (Kraemer and Thiemann, 1989).

The first step in conducting power analyses is to determine what will be considered a policy relevant impact. For example, will a program be considered successful if it results in a 10 percent decline in adolescent pregnancy? A 20 percent increase in use of reliable contraceptives? Agreeing on a policy relevant impact size will be an important first step in designing any evaluation study.

Once such an impact size has been determined, program evaluators can conduct power analyses to determine how many teens (or programs) must be included in the evaluation in order to detect a program impact of this magnitude. Researchers should consider the desired sample size not only for measuring the impact of the program as a whole, but also for analyses of the impact of the program among specific subgroups of the adolescent population. For example, a sample of 1000 teens (500 who receive services and 500 in a control group) may be an adequate size to determine overall effectiveness of the program. However, researchers may also be interested in whether the program is equally effective for teens of various racial or ethnic groups. Sample sizes would therefore need to be adequate for such analyses as well, and power analyses would need to be conducted for subgroups as well as the total sample. A formula and sample power analysis are shown in Appendix B.

Note that power analyses do not determine whether a program will have an impact of a certain magnitude. This question cannot be answered until data from the evaluation are collected and analyzed. Rather, power analyses ensure that, if the program has an impact, the evaluation has been designed in a way that researchers will be able to detect its effect.

Quasi-Experimental Designs

It can be difficult to implement rigorous experimental studies for a variety of reasons, as noted above, ranging from the cost of such studies, to the difficulty of identifying, establishing, or maintaining a true control group, to ethical issues related to withholding services from a control group (for example, withholding a highly effective method such as Norplant® from a teenager who really wants to obtain this particular method). For these reasons, quasi-experimental designs are often substituted. However, because quasi-experimental designs are sometimes as expensive or nearly as expensive as true experimental studies without being nearly as conclusive as true experimental studies, implementing a quasi-experimental study should be approached with caution. As Card (1988, p. 5) notes, "unfortunately, all of these comparison groups share a common potential pitfall: without random assignment, one can never be sure whether outcome differences found between the treatment and comparison groups are attributable to the program's intervention itself, as postulated, or to pre-existing differences between the treatment and comparison groups."

Card recommends several strategies for addressing the problem of selectivity bias, including selection of more than one comparison group, in the hope that their selectivity biases will be different, and collecting full baseline data on an array of characteristics believed to be confounded with the outcome of interest so these factors can be statistically controlled.

Comparison Sites

The goal in selecting a comparison group for a quasi-experimental study is to identify a population that is as similar in as many respects to the treatment population as possible. Thus, the nature of the desired comparison group will vary depending upon the characteristics of the treatment group. A school-based intervention might use students in a comparable school as a comparison group, while an intervention focussed on a small town might use residents of a nearby town as a comparison population. Clients at a nearby welfare office might constitute a comparison population for an intervention centered in a welfare office, and a clinic study might use patients at a comparable clinic. Having several or multiple comparison sites increases the validity of the comparisons that are made (Greenberg, Meyer, and Wiseman, 1994). With a small number of sites, unmeasured differences may swamp program effects, and it may be difficult or impossible to identify site-specific effects. By increasing the number of sites, evaluators can increase the variability in the comparison populations and programs, making the results more generalizable, and they can lower the risk that any given site is so unique that the results from that site drive study results.

Comparison Created Groups from Existing Survey Data Bases

Given the need to collect baseline and outcome data for members of the comparison group as well as for the experimental group, cost becomes a consideration. Card (1988) recommends that when resources are limited, as they generally are, investigators consider using existing data bases to create a comparison group as one quasi-experimental strategy.

Data from representative surveys such as the National Survey of Family Growth (NSFG) and the National Longitudinal Survey of Youth (NLSY) can be used to create comparison standards that adolescent pregnancy programs can use to evaluate the success of their program. In this strategy, treatment groups are comprised of the adolescents who are eligible for a particular program, for example, a sex education program. Comparison groups are comprised of comparable youth who are respondents in a national survey. Thus, a sex education program, including abstinence, for ninth and tenth graders might define a delay in sexual initiation as its goal, and provide a six-week course to all students in these grades in the high school. Outcome data for project participants on this outcome can be compared to outcomes found among teenagers in national samples who are similar in terms of their demographic and socioeconomic background. Specifically, the percent having first sexual intercourse, within age and race/ethnicity sub-groups, might be compared for teenagers in the 1996 NLSY versus teenagers in the sex education program.

With several major new federally-sponsored surveys in the field, there are realistic possibilities for creating up-to-date comparison groups in the late 1990s. For example, a new NSFG is in the field in 1995, collecting detailed fertility data among females aged 15-19 (as well as for older women 20-44); the National Survey of Adolescent Males is being conducted among males aged 15-19 in 1995; a new NLSY will be fielded in 1996 among a national sample of adolescents aged 12-17; and the Adolescent Health Survey is being fielded in 1995 among a sample of adolescents in grades 7 through 12. All of these surveys include large, nationally representative and diverse samples, with large sub-samples of white, black, and Hispanic adolescents. (These data bases are described in greater detail in the Appendix provided in Moore, Miller, Glei, and Morrison, 1995, the companion volume to this report.)

Comparison Individuals Matched with Treatment Individuals

Another quasi-experimental strategy is to match individuals in the treatment group with comparison individuals on a series of characteristics, to assure that they are as similar as possible, and then compare their outcomes (Card and Reagan, 1989). It is important, of course, that the variables on which matching is done are relevant to the goal of the intervention (Rossi and Freeman, 1993). For example, for a study of fertility, it would not be helpful to match on height or favorite sport, but it would be important to match on gender, age, and race/ethnicity. Thus, a sample of teens receiving a sex education intervention might include males and females, African-American, Hispanic, and white students, and ninth and tenth graders, who are from single parent and two parent households. The matched sample would have to match every student in the program with a non-participant on each and every one of these characteristics. Thus, an Hispanic female ninth grader from a single-parent family who is provided the sex education program would be matched with another Hispanic female ninth grader from a single-parent family who is not receiving the sex education intervention. Group differences in outcomes across hundreds of such pairs would constitute the evaluation. Unfortunately, since many other relevant characteristics that cannot be held constant may differ for the experimental and the comparison individuals (e.g., educational aspirations or grades), this strategy is inevitably not the equivalent of an experimental approach based on randomization. However, if matches are made on a series of relevant variables, results may shed some light on program effectiveness at considerably less cost than an experimental study.

Generally matches are chosen from a similar population, such as students in a nearby school, clients at a nearby clinic, or patients at a similar health maintenance organization. It is possible, though, not only to select a comparison match from a population of students, clients or patients, but also to select a match from an existing data base, such as the NSFG or the National Survey of Adolescent Males. Then the outcome for the program participant can be compared with the outcome obtained by the match found in the data file.

Comparisons Using Before/After Data

Another quasi-experimental approach involves comparing data from before an intervention to comparable data collected after an intervention. Thus, birth rates in a school prior to the introduction of a family life education intervention might be compared with birth rates a year or more after the intervention. Similarly, contraceptive vigilance among teen clinic patients prior to the introduction of an intensive counseling and education program might be compared to contraceptive use after the program. The most common threat to the validity of a study with an over-time comparison is that some other kind of change may also occur during the time period, clouding the clear cause-and-effect data needed to establish impacts.

Because of the varied but inevitable problems associated with quasi-experimental designs, combining multiple types of quasi-experimental comparisons can be helpful. Below we suggest a number of studies that could be initiated with a quasi-experimental approach.

Possible Quasi-Experimental Studies of Schools

High schools, junior high schools, and middle schools represent attractive locations for studies because most adolescents, even at-risk adolescents, attend school, at least through ninth or tenth grade. However, because two schools are rarely identical, it is generally necessary to include multiple schools in the treatment group and in the comparison group. This raises costs; therefore, it can be difficult to implement an intervention in a sufficient number of schools to conduct an experimental study. Most school studies end up being quasi-experimental studies. The closer investigators can come to meeting the requirements of random assignment of comparable schools, the stronger the evaluation will be. If a sufficient number of comparable schools agree to participate, if students or most students who move can be followed, and if both baseline and follow-up data can be collected in all of the treatment and comparison schools, a useful quasi-experimental study can be conducted using schools as the unit of observation. [Several possible studies including randomly selected schools are described below.]

Only a few school-based interventions have been successful in reducing rates of sexual activity and pregnancy school-wide. These include the *Self Center* in Baltimore, Maryland and the *Postponing Sexual Involvement* program implemented in Atlanta, Georgia. However, it is not known precisely what components of these programs distinguish them from most other programs to make them successful. A series of planned variation studies could be conducted, in which sets of randomly selected schools are assigned to implement a clear and distinctive set of activities across the student body over a period of years. A single set of comparison schools can serve as the comparison group for all of the schools.

Males tend to be neglected in research and program interventions. Schools could be used as the locus for programs directed at male students, programs that not only provide the facts of sex education, but discuss gender relationships, family roles, and the legal requirements for child support, as well as the social obligations associated with fatherhood. Male leaders and mentors, including specially trained teachers and coaches, could provide a sustained presence in the school. Rites of passage activities might be developed. Goals might include developing a positive value for responsible parenthood, avoidance of violent and coercive relationships, enhancing respect for females, delaying sexual initiation, and encouraging use of contraception. Effects might be found on individual behavior or, possibly, at the level of the school, such that the school-wide pregnancy rate declines.

Schools could also provide a setting for programs directed at females. Females who have strong academic aspirations are at lower risk for non-marital childbearing (Moore, Glei, Morrison, and Manlove, 1995). Early indicators of weak aspirations include frequent school absences and low grades. Programs that provide alternative sources of self-esteem, positive activities, help with schoolwork, positive role models, and a clearer sense of the responsibilities of parenthood (such as the *Teen Outreach Program* initiated by the Junior League) could be provided at an intensive level in experimental schools. Again, changes documented among individual girls might be accompanied by changes in school-level outcomes, if the program is offered to a substantial proportion of the girls in the school.

Elementary schools that are implementing strong early childhood educational programs as part of experimental studies might also examine the influence of the intervention on the sexual and fertility behavior of the participants in the latter years of elementary school and in middle school or junior high. Although programs directed at children aged three to six may not seem the logical place to focus efforts at preventing adolescent parenthood, data indicate that many of these young participants will be exposed to the risk of early, non-marital sex, pregnancy, and sexually transmitted infections within just five to ten years. One of the few programs shown to have a long-term impact in preventing teenage childbearing is the *Perry Pre-School Program*. A strong preschool-to-school transitional program might be a promising place to look for a program that prevents adolescent pregnancy.

There is some evidence that teens who are leaders in student organizations are less likely to become adolescent parents (Moore, Glei, Morrison, and Manlove, 1995); however, it is not clear whether this association reflects the characteristics of teens who obtain such positions or is due to being involved in leadership activities *per se*. The hypothesis that adolescents engage in sex because they lack positive ways to fill their time or obtain self-respect is both widespread and compelling. This hypothesis can be assessed if opportunities are exogenously introduced into a setting and the behavior of teens in that setting is compared with teens in a setting without enriched opportunities. An intervention study could select treatment schools to receive staff and other support to provide a rich array of extracurricular and athletic opportunities. Comparison schools would not receive such assistance. However, comparison schools could receive significant gifts during the course of the study that would be unrelated to the purpose of the intervention, such as books for the school library, in order to maintain their cooperation with data collection over time.

Possible Quasi-Experimental Studies of AFDC Offices

Welfare offices represent a site where random assignment studies of education and training are frequently implemented. Studies of strategies to prevent first pregnancies among adolescents in families that receive AFDC payments could also be conducted in welfare offices. Because some welfare offices lack management information systems that could support such a study, eligible sites would ideally have computerized caseload records. Among offices that have the capacity and interest to conduct a study focussed on adolescents in welfare offices, some could be randomly assigned to receive the treatment while other offices serve as the comparison sites. Welfare offices in the treatment group could provide special counseling for parents and/or for their adolescent children, including information about reproduction, sex, contraception and pregnancy, to empower these families to help their adolescents postpone childbearing.

Opportunities for studies include randomly assigning welfare offices to receive additional resources to focus on adolescents in families that receive welfare, particularly those adolescents in families that have been dependent for two or more years. Special training for caseworkers, lower caseloads, special programs for adolescents such as sex education, discussion groups, tutoring, and summer job opportunities, group activities and trips, and linking with volunteer mentors might be provided to adolescents, male as well as female. Outcomes to be examined could include the proportion becoming sexually active, the proportion using contraception, and the proportion becoming pregnant or having/fathering a child.

Possible Quasi-Experimental Studies Involving Clinics

Family planning clinics represent another location for random assignment experimental studies. Because Norplant® is costly and is difficult to provide free of charge to women who cannot afford it, an opportunity exists to randomly select clinics to provide Norplant® free or at a very low cost, plus enriched counseling and patient follow-up. Randomly assigned clinics can be chosen to receive support to provide Norplant® cost to all teens who wish to receive the implant. Patients in these clinics would have Norplant® implanted at no cost and could receive detailed counseling both before and after implantation regarding possible side effects. The comparison group of clinics would provide the services normally provided to clinic patients, but would receive additional resources to enable them to obtain data from their clients for comparison with patients in the experimental clinic sites. Similar studies could be implemented for Depo-Provera®.

Possible Quasi-Experimental Studies Involving Communities

Although it seems unlikely that a community-level job creation project will be initiated in order to examine the impact of such a project on levels of teenage childbearing, it is reasonable to embed a study of adolescent childbearing within a larger project such as an evaluation of federally-funded empowerment zones or enterprise zones. Such a study would only be likely to affect fertility if substantial, widespread, and sustained increases in job training and job creation were provided; the simple presence of a single job training program or small increases in job opportunities should not be expected to have impacts on non-participants who live in the community. If communities that applied but were not chosen to be sites are used as comparison groups for a larger quasi-experimental study of the impact of economic opportunities, the study could be expanded to include adolescent fertility as another outcome measure. If surveys of teenagers are conducted, information could be collected on levels of sexual activity and contraceptive use. If no survey data were collected, then city or county-level birth rates could be examined and compared with cross-sectional and trend data on adolescent childbearing in the comparison sites (although this approach is less rigorous). The hypothesis to be investigated is that adolescents living in communities that experience a significant and sustained increase in opportunities for education and employment in their community will be more likely to delay sex or use contraception. Community-level effects of the birth rate can only be anticipated, however, if the intervention is sufficiently large-scale to affect birth rates across the community and if the catchment areas for the intervention and for fertility statistics have complete or considerable overlap.

Studies of new laws and policies can also be tested in large-scale community experiments. A number of communities would be randomly selected to implement new policies, prior to implementing them nationwide. For example, implementation of child support enforcement programs that focus particular effort on establishing paternity and support orders for all fathers of babies born to teenagers, plus vigorous advertising of this policy among males who are not yet fathers, could be assessed not only for its effect on child support payments over time but for its effect on deterring young men from fathering babies with young unmarried partners. Similarly, varied types of grandparent liability requirements to make parents of both the teenage mother and the father of her baby liable for economic support can be implemented at the county level; evaluations could examine the effects not just on couples who have had children but the potential preventive effects that might occur if potential grandparents wishing to avoid becoming grandparents prematurely influence the risk-taking of their sons. Thus, local communities could provide a laboratory for policies that policy makers are thinking of implementing on a national or state level.

Other community-level initiatives could include a media campaign that attempts to change values and norms about early sexual activity or pregnancy or that attempts to provide information that would help adolescents locate contraceptive services or use contraceptive methods correctly. From the set of communities that are interested, a half dozen or more could be randomly selected to receive media messages that are particularly designed to be used on radio stations that are popular with teens. Programs could provide informational messages regarding the risks of early non-marital sex, the risks of unprotected sex, such as pregnancy and sexually transmitted infections, model communication among couples, describe child support laws, etc. Specific information about services, counseling, and programs in the community could be provided. After a year, comparisons of pre-test and post-test data for teenagers in experimental and comparison communities regarding knowledge, norms, and behavior can be analyzed. Alternatively, pregnancy, abortion, and birth rates before and after the intervention can be analyzed.

However, whether designing media messages or programs, there is a strong need to recognize diversity among teens. For example, based on surveys, focus groups, and interviews with 295 subjects in Washington, DC and Philadelphia, PA, McLaurin and Juzang (1993) conclude that the mainstream messages aimed at black youth have little effect because the messages fail to reach them in a way that speaks to them. Mainstream society holds little credibility with these urban youth; their subculture not only tolerates risk taking behavior but perhaps encourages such behavior (Motivational Education Entertainment (MEE), 1992). Juzang (1993) notes that while black youth are intense consumers of non-print media such as movies and television, they are distrustful of television because of its mainstream images. He states that these teens attribute the most credibility to their peers; messages viewed as originating outside of their culture are discounted. Consequently, it is very important to recognize different communication styles in trying to relay messages to minority teens (Juzang, 1993). One message will not reach every teen, and attention must be paid to relaying messages which are relevant for the particular subgroup of teens being addressed.

In addition, older sexual partners of teen females may also require different messages. Although two-thirds of the babies born to teen females are fathered by males aged 20 and older (Moore, 1995), messages tailored to these males have not been identified. There is a need to develop messages that stress contraceptive responsibility, prevention of sexually transmitted infections, and child support laws, and that deal with the differences in maturity and power inherent in relationships between older men and adolescent girls.

Other factors, such as the consistency of the mentorship relationship or the charisma of the intervention staff leader, are often not measured or evaluated, but also may have an impact on the success of the intervention. Several programs, including the Denmark, South Carolina *School/Community Program for Sexual Risk Reduction Among Teens* and the Baltimore, Maryland *Self Center* appear to owe their success, at least in part, to the extraordinary efforts of a well-liked, highly motivated staff member (Koo et al., 1994; Personal communication, L.S. Zabin, 1995). Attracting such talented and dedicated individuals for a lengthy period is difficult, given low and uncertain salaries in this field. Funders might consider endowing several such positions, to ascertain the effects on the recruitment and retention of critical staff.

Natural Experiments

Formal experiments introduce planned change, frequently at considerable cost. A lower cost alternative is to examine the effects of naturally-occurring changes on the sexual and fertility behavior of adolescents. Opportunities to assess the effects of natural experiments can be found in historical data, or they can be identified in unfolding events. For example, data from the 1980s can be analyzed to assess how economic and policy changes affected adolescent fertility across the decade, or data can be collected for the 1990s to assess how current policy changes affect adolescent fertility during the remaining years of the decade. The requirement for conducting a natural experiment is that the program, policy or event of interest has to have taken place, and there has to be data available to assess the effects of the natural experiment. For example, if a researcher wanted to explore the effects of television on adolescent sexual initiation, an important but very under-studied topic (see companion volume, Moore, Miller, Glei, and Morrison, 1995). If a particular community were to lose all television and cable service for a period of several years for a technical reason unrelated to the preferences of town residents, the conditions for a natural experiment would be present. Specifically, the sexual activity of adolescents in the town without television could be compared with the sexual activity of adolescents in similar towns, if data on sexual activity were available for the respective towns.

The opportunity cost hypothesis is one of the most compelling arguments for the higher rates of teenage childbearing found among disadvantaged youth (see companion volume, Moore, Miller, Glei, and Morrison, 1995). It is hypothesized that teens viewing themselves as having nothing to lose are less likely to delay childbearing, because the effects of an early birth pose relatively few costs to their future educational and/or economic prospects (Moore, Simms, and Betsey, 1986). This is a difficult hypothesis to test because of the difficulty of creating a real, substantial, and sustained exogenous change in the economic and/or educational opportunities available to adolescents. Natural experiments provide opportunities to examine this hypothesis. Thus, the effects of natural variations in economic opportunities can be examined by comparing fertility in comparable communities experiencing different economic fortunes. For example, cities of comparable size and demographic composition in the same state might differ in that one community is selected as the site for a major manufacturing plant. If several such pairs of communities could be identified by researchers, vital statistics data over time could be compared to identify whether improving (or diminishing) economic opportunities had the hypothesized effect of reducing (or increasing) rates of adolescent childbearing.

Similarly, pairs of communities that opened or closed community colleges provide a natural experiment. Adolescents in a town with no college or a college that closes face diminished educational opportunities and students in towns where a college opens face improved prospects. Across a number of pairs of communities, the opportunity cost hypothesis would predict lower levels of adolescent childbearing in communities with accessible educational opportunities than in communities with no such opportunities.

Natural variation may also occur with respect to laws about welfare receipt. If the AFDC program is devolved to the states either explicitly by Congress or through a series of waivers granted by the Executive Branch, substantial state-level variation will develop. Net of other state-level differences, policy changes at the state level might be tracked to examine their impact on rates of pregnancy, abortion, non-marital teen childbearing, and overall teen childbearing.

Analyses of Individual-Level Micro Data

Researchers have increasingly recognized that the development of children is affected by a wide range of influences beyond the immediate family. Ecological models of human development posited by Bronfenbrenner (1979) have caused researchers to increasingly implement studies of how neighborhood, school, community, and policy influences affect children as they grow up. Despite formidable theoretical, conceptual, and data challenges (Tienda, 1991; Babbie, 1989), research examining contextual influences has burgeoned in recent years. One strategy implemented by economists and sociologists is to include policy and community-level variables within micro data bases, such as the NLSY, the NSFG, and the National Survey of Adolescent Males. Researchers are exploring varied strategies to assess neighborhood influences, and articles are increasingly being published in peer reviewed journals that have added geographic and policy variables to existing micro data files (e.g., Grady, Klepinger, and Billy, 1993; Brewster, 1994; Billy, Grady, Moore, and Brewster, 1993; Moore, Morrison, and Glei, 1995). Wherever contexts differ across geographic areas, data assessing such differences can be appended to an analysis file.

Specifically, the data collection organization or design team needs to identify geographic locators, preferably small units more similar to neighborhoods than to counties or entire cities. Researchers comparing zip code and census tract data (Brewster, 1994) have found that the smaller geographic units are better predictors than large units such as the zip code or county. This finding is completely reasonable under the assumption that the characteristics of an entire county, for example, are averaged when county level contextual measures are created, reducing the real local variation that occurs within the county. The proximal environments actually experienced by youths in different portions of a county can be very different, particularly if it is an urban county containing wealthy suburbs and an inner city area. Zip codes in large cities frequently do correlate with real socioeconomic differences because cities contain numerous zip code areas which cover a small geographic area and vary widely in their socioeconomic and demographic characteristics. However, in small towns, the entire town is likely to be included within one zip code, making this a less adequate measure of the socioeconomic context experienced by adolescents in small towns. Methods to obtain measures of smaller geographic units are only now under development. Therefore, across geographic areas, census tract data are currently the preferred level of measurement for community-level studies. Of course, some variables, such as the AFDC benefit level and abortion policy, vary at the state level and must be added to a data file at the state level.

Numerous issues can be analyzed with micro-level survey data. Appropriate dependent variables measured at the individual level include the timing of first sexual intercourse, contraceptive use at first intercourse, current contraceptive use, the decision to marry or not in the event of a non-marital pregnancy, welfare receipt, and residential decisions among non-married parents. Independent variables include variations in levels of benefits under programs such as Aid to Families with Dependent Children, differential availability of family planning services, and state program variations in programs such as child support enforcement, Medicaid coverage of abortion, and Medicaid expansion coverage. In addition to various measures of policy, other contextual variables assessing levels of poverty, single-headed families, and community values and norms can be obtained and merged onto the micro data file. These variables are needed to control for the levels of need in communities (e.g. poverty rates), for variation in the role models to which young people are exposed (e.g., the proportion of parents who are single parents), for differences in community values (e.g., percent in a fundamentalist religion), and to assess alternative opportunities available to youth (e.g., unemployment rates). When these variables are obtained and incorporated into a single data file, multivariate analyses can be conducted on the individual-level data augmented by the contextual variables. Analyses can be conducted on the entire sample, or among sub-groups, for example, among low-income individuals compared with higher-income individuals. It is necessary, however, to be cautious out of concern for ecological fallacies, that is, presuming that group or community level data necessarily reflect the behavior of a given individual (Babbie, 1989). Causality cannot be assessed, but analyses can eliminate variables that prove to be unrelated to the dependent variables of interest.

Non-experimental statistical procedures can be used in evaluation studies of non-experimental micro-level individual data, to enable analysts to control for selectivity into participation in a program, a major threat to the validity of non-experimental evaluations (Rossi and

Freeman, 1993). As Hotz (1990) notes, some methods of dealing with selectivity assume that selection bias can be dealt with by using multiple regression or matching techniques to control for individual-level observable characteristics. Another type of strategy presumes that there are also lasting but unobservable differences between participants and non-participants which influence their selection and outcomes. A full discussion of the debate regarding how successful these strategies are is beyond the scope of this paper; but several examples can suggest the range of non-experimental statistical approaches employed.

In a recent paper using the 1979 cohort of the NLSY, Currie and Thomas (1994) compare test scores, grade repetition, and immunization rates for siblings, one of whom participated in Head Start and one of whom did not. By comparing outcomes for siblings, they controlled for family effects that might otherwise be correlated with participation in Head Start. The authors find no effect of Head Start when only observable family effects are controlled, but then find that Head Start has positive and significant effects on positive health outcomes for white and black children as well as positive cognitive outcomes for white children when non-observable family effects are controlled.

An example of another approach is a recent paper by Moore, Morrison, and Glei (1995) which examines whether welfare represents an incentive for early sexual initiation. Moore and colleagues appended state and zip code level variables to the National Survey of Children, an individual-level micro data base, assessing the generosity of state welfare benefit levels and the frequency of welfare receipt in the zip code. While these benefit variables were not found to hasten sexual initiation, intergenerational receipt was found to have a borderline significant effect on the timing of first sex among girls but not boys. Among boys, high neighborhood welfare receipt was associated with earlier sexual initiation. The researchers also estimated a selection model for first sex, and examined contraceptive use among sexually-experienced adolescents. Again, they did not find welfare benefits to affect contraceptive use, but found modest evidence that maternal welfare receipt predicts non-use of contraception at first sex among girls, net of the selection factors associated with an early transition into sexual intercourse. No such effect was found among boys.

Analyses of Macro-Level Data

This evaluation strategy uses units such as states, cities, and counties as the unit of analysis. Given the increasingly strong and varied role played by the states in family policy and policy regarding poverty, it is useful to assess how variations in state policy are related to variations in state-level measures of adolescent fertility. In addition, because labor market and educational opportunities often vary by county and city, it is useful to assess the effects of these factors with county and city-level data. Such analyses cannot be definitive with regard to causality because states differ in numerous ways, not just in their laws and policies. For this reason, simple comparisons across states are inappropriate. For example, it is not appropriate to compare teen fertility rates in states with higher versus lower AFDC benefit levels in order to assess the impact of AFDC benefits on adolescent fertility. However, many socioeconomic and demographic differences can be controlled for statistically. Census data can be appended to the analysis file measuring the level of poverty in the state, the proportion with low education, the proportion minority, and the proportion of single parent families, and multivariate regressions can be estimated with the state as the unit of analysis. In addition, prior levels of the outcome being tracked, such as the teen birth rate, can be controlled, so that the dependent variable serves to assess the incremental effect of policies net of these prior levels (e.g., Moore et al., 1994). Remaining associations between the policy variables of interest and the dependent variable provide suggestive evidence that an association may be present. Such associations cannot, of course, provide proof that introduction of a program or that funding levels for a program are causally related to the dependent variable.

With the state as the unit of analysis, there are, of course, only 51 cases, which severely limits the number of variables that can be included in any given regression model. Creating composite measures of socioeconomic characteristics can be useful (e.g., combining unemployment rates and wage rates to create a measure of employment opportunities) to reduce problems of multicollinearity (i.e., high correlation among two variables such as the proportion of single-parent families and the proportion of families receiving AFDC).

As noted in the discussion of micro-level analyses, smaller units of analysis are to be preferred to very large units such as states. For example, city- or county-level data on fertility, socioeconomic characteristics, demographic factors, and employment opportunities can be merged into an analysis file, together with state-level measures of policies, such as AFDC benefits and Medicaid policies. Multivariate regression models can then be estimated with the county as the unit of analysis.

One problem with macro-level analyses is the inability to control adequately for varied factors, such as attitudes and aspirations, which are known to affect adolescent sexual and fertility behavior (see companion volume, Moore, Miller, Glei and Morrison, 1995), but which cannot or have not been measured at the state or county level. If the population of a given city or county differs substantially from another on such a variable, results can be affected by the omission of a control for these kinds of variables. Out of necessity, analysts must resort to including measures such as the proportion of the state population who belong to a fundamentalist religious group, the percent who voted in a recent national election, or the incidence of violent crime (Moore et al., 1994) as proxies for differences across states in relevant norms, values, and aspirations.

As true with micro-level analyses, macro-level analyses cannot provide definitive evidence regarding causality. However, it can help sort through hypotheses, indicating where no associations exist, where associations exist but are easily explained by other variables, and instances where hypothesized associations exist which are not explained by other characteristics of the state, city or county.

Case Studies and Qualitative Studies

Information obtained from anthropological investigations, focus groups, and qualitative interviews cannot be viewed as evaluation studies; however, such work can nevertheless serve to inform evaluations. The hypotheses that are investigated, the programs that are designed, the services that are provided, the questions used on evaluation instruments, and the interpretations of findings inevitably reflect the world view of those who design programs, policies and evaluation studies. Work that directly investigates the perspectives, assumptions, language, aspirations, and relationships among the adolescent populations whose sexual and fertility behavior adults are trying to influence can help design better programs and better evaluations as well.

Conclusions

In this chapter, we have discussed a variety of intervention and evaluation strategies. Given how few programs incorporate strong evaluations, and the lack of clear findings in the available literature on adolescent pregnancy prevention, we have emphasized the need to build a literature based on rigorous experimental evaluations of intervention programs and policies. Although we have also described a number of non-experimental approaches that can contribute to our understanding of program effects, we have placed the highest priority on the implementation and rigorous evaluation of experimental studies. Despite this emphasis, it is important to note the critical and complementary importance of basic research that identifies patterns of behavior and the causal mechanisms associated with varied patterns of adolescent sexual, contraceptive, and pregnancy resolution behaviors. Results from such basic research can be used to inform the development of intervention strategies desired by service providers, policy makers, and program designers.

IV. SUMMARY

In this review, we describe a wide range of pregnancy prevention programs aimed at delaying the transition to first sex, improving contraceptive use among sexually active adolescents, influencing decisions about pregnancy resolution, and preventing subsequent births among adolescent parents. Programs targeting each of these stages range from traditional sex education programs and interventions designed to improve adolescents' decision-making and interpersonal skills, to tailoring contraceptive services for young clients, to multi-faceted initiatives targeting a wide range of adolescent needs. A table showing the evaluation approach utilized by each program we reviewed is presented in Appendix A, and a detailed description of key aspects including information about the intervention, evaluation (if an evaluation was conducted), and a critique of the evaluation design for each program is included as Appendix C. This review also highlights promising theoretical approaches for pregnancy prevention initiatives and offers suggestions for increasing the rigor of evaluation strategies for future pregnancy prevention programs.

Despite the myriad of pregnancy prevention initiatives that have been implemented over the past decade, we find in evaluations, unfortunately little hard empirical evidence of impacts. Most programs demonstrate little to modest impact on adolescent sexual and contraceptive behavior. Furthermore, because most initiatives are short in duration, it is unclear whether the modest impacts that are observed could be sustained over a longer period of time. Most of the initiatives we reviewed are *ad hoc*, uninformed by prior research, theory, or field experience, target a relatively small number of adolescents, and fail to employ a rigorous evaluation strategy, if an evaluation has been conducted at all. All of these factors may individually and/or collectively contribute to the limited impact on adolescent behavior that is observed. However, even well-designed interventions, including those with a strong theoretical premise and rigorous evaluation design, cannot be expected to have substantial impacts at the state or national level if they are only implemented on a demonstration basis, or if they are overwhelmed by other problems such as family and community breakdown. Moreover, impacts cannot be expected at the national level if interventions are introduced in only a few local communities. Sizeable reductions in national levels of adolescent fertility will require more systematic, sustained, and widespread implementation of prevention programs and strategies.

Indeed, in the companion volume to this report, several social and economic factors, including poverty and economic disadvantage, problem behavior, school failure, and family disorganization and breakdown were identified as important predictors of adolescent childbearing (Moore et al., 1995). Yet, few pregnancy prevention initiatives address the social, personal, and/or economic issues that so many studies consistently find to contribute to the adolescent's capacity to avoid sex or effectively use contraception. Many programs to prevent adolescent pregnancy are provided in settings where poverty and school, family, and behavior problems pose substantial obstacles to be surmounted. Reducing high rates of adolescent pregnancy will require attention to these factors, as well as abstinence education, information about sex, and contraceptive services.

Another factor which limits the ability of interventions to affect teen sexual behavior and pregnancy is the lack of attention to males. The majority of interventions are female-focussed and either fail to include males in the intervention, or fail to consider the role of older males in teen pregnancy. In addition, sexual coercion has been linked with early sexual activity among females (see companion volume, Moore, Miller, Glei, and Morrison, 1995); however, few programs take this into account in designing interventions. It is difficult to prevent pregnancy by increasing knowledge and motivation to prevent pregnancy if the female is becoming pregnant as a result of a non-voluntary sexual experience.

However, before large scale initiatives can be implemented, the current knowledge base on pregnancy prevention programs must be expanded to delineate which strategies are the most promising, which aspects of which programs demonstrate the strongest impacts, and which programs are successful in affecting behavior across various communities that are diverse with respect to ethnicity and socioeconomic status. The lack of credible information about which programs are truly successful suggests that the development of programs that combine a strong theoretical design with rigorous evaluation research will be critical in the next decade.

Although the results of our review offer few definitive conclusions about specific strategies which prove most effective for preventing adolescent pregnancy, we find several examples of innovative, well-designed, and strongly evaluated initiatives that demonstrate some impact on sexual activity and contraceptive use, thereby leading to a lower probability of teen pregnancy. Emerging from these initiatives are several key components that appear particularly important for affecting adolescent fertility-related behavior. Evidence from these initiatives that can help guide the development of future initiatives.

First, it is evident that information or sex education alone is insufficient to delay the transition to first sex or to improve contraceptive use among adolescents. Although knowledge is the minimum requirement for affecting behavior change, adolescents also need communication and behavioral skills to help them avoid or prevail over risky and challenging interpersonal situations. Thus, pregnancy prevention efforts that offer youth participants the opportunity to learn how to communicate their feelings to their peers and/or partners, to effectively maintain control over their own actions when challenged to engage in risk-taking activities, and to feel comfortable with themselves about avoiding such behaviors, appear to be most promising strategies for delaying first sex.

Second, adolescents who become sexually active require access to contraceptive services that adequately and effectively meet their needs. While delaying transition to first sex is the most effective way to avoid pregnancy and sexually transmitted infections, not all adolescents will be successful in avoiding sexual intercourse during their teenage years. Research evidence shows that the dual message encouraging adolescents to delay intercourse but to use contraception, if and when they do have sex, is more effective than approaches which focus solely on abstinence or soley on contraception. It is important for programs to acknowledge the needs of sexually active teens and make certain that access to contraceptive services and supplies, adequate counseling and follow-up are available to sustain effective use of contraception. Services that are accessible to teens, that attempt to reduce the barriers to adolescents receiving care (e.g., minimize fear of medical procedures), and employ stronger and more continuous outreach and follow-up, have a greater chance of getting adolescents to seek contraceptive services earlier, and have a higher probability of sustaining contraceptive use.

Third, peers are a critical component in influencing adolescent pregnancy risk-taking behavior. Peers can be both a tremendous source of support and pressure for adolescents. Peers who avoid an early pregnancy can act as role models for one another and lend support for one another when teens decide to avoid sex or to effectively use contraception. Older peers are particularly instrumental in a pregnancy prevention initiative, because they act as role models and serve as credible messengers. Anecdotal evidence from the *Postponing Sexual Involvement* initiative indicates that teens involved as peer educators report an "obligation to remain abstinent and avoid pregnancy" (Personal communication, M. Howard, 1994). They recognize that younger peers look up to them, and believe that to engage in the very behavior they encourage others to avoid would be hypocritical. Thus, the involvement of peer educators can potentially influence the behavior of younger adolescents and the peer educators as well.

Fourth, initiatives that offer strategies that address the specific needs of adolescents or adolescent sub-groups are also promising. It is easy to assume that efforts targeting adolescents are adequately designed with an adolescent in mind. That is, they are developmentally, gender, or culturally appropriate for the group of adolescents that are being targeted. Our review suggests that most strategies do not attempt to address the specific barriers adolescents may encounter when avoiding pregnancy (e.g., age, cultural, or gender barriers to accessing contraceptive services), nor do they employ strategies or messages that are relevant to the specific teens that are being targeted. Evidence from the Motivational Education Entertainment (MEE) study of black urban youth (Jusang, 1993) suggests that identifying the specific needs, issues, and even language of target youth can help to increase the level of success of the initiative.

Fifth, efforts that involve various segments of the adolescent's community are also promising. These segments include parents and families, as well as institutions such as schools and churches. Most parents, like most adolescents, wish to have their children delay pregnancy. The involvement of families and other segments of the community means a greater level of emotional and social support for pregnancy prevention among adolescents. Community involvement increases the opportunity to address the larger social and economic issues that influence adolescent pregnancy. Moreover, initiatives that allow parents and communities to participate in the development of the initiative, to determine the focus and range of activities that will be implemented, and to participate in some of the pregnancy prevention activities provides for an overall climate which is supportive of pregnancy-avoiding behavior and will have a greater chance for longevity and overall success.

Sixth, interventions that are rooted in theory and articulated within a clear model offer the strongest foundation for pregnancy prevention among adolescents. Initiatives that delineate the behaviors which are targeted and the mechanisms through which those behaviors will be influenced have a greater likelihood of effecting behavior change among youth participants. One set of promising theoretical approaches includes behavioral theories focussing on the importance of cognition and the acquisition of skills, perceived susceptibility to pregnancy, and the costs and benefits of preventive behavior. Intervention models need to consider the distinctive influences of peers, partners, family members, schools, the local community, the media, and local, state and federal policies. To improve the content and evaluation of adolescent pregnancy prevention programs, we suggest developing approaches that are strongly grounded in behavioral theory such as Social Learning Theory or a utility maximization perspective, that employ intervention strategies consistent with theory, and that use systematic and rigorous evaluations. Data suggest that programs which include all three of these characteristics are more likely to demonstrate impacts.

Finally, in order to demonstrate impacts of pregnancy prevention programs, it is necessary to conduct experimental evaluations. Experimental studies represent the only approach that allows policy makers to have confidence in the impacts or lack of impacts of an intervention. With any other design, it is possible that confounding selection factors may be responsible for the results. Hence, despite the cost and effort involved in randomly assigning subjects to treatment and control groups, experimental designs represent the most rigorous and informative evaluation strategy.

Random assignment is most commonly done for individuals, but clinics, welfare offices, classrooms, and families can also be randomly assigned to a treatment group which receives the intervention or to a control group which does not receive a given treatment.

For example, a variety of interventions might be considered that address multiple risk factors such as school failure, behavior problems, family problems, and poverty which have been identified by research studies as predictors of early parenthood. Possible experimental studies involving random assignment of individuals include identifying randomly assigned samples of children enrolled in early childhood educational programs who could be followed into adolescence to assess whether such an early childhood intervention has impacts on later adolescent sexual and fertility behavior. In addition, programs that randomly assign children and young adolescents who are experiencing academic difficulties to intensive educational remediation, possibly including volunteer tutors or mentors, can be examined to assess whether such programs reduce the incidence of adolescent sexual and contraceptive behavior and pregnancy. Similarly, programs could target adolescents and even younger children (pre-adolescents, elementary-school children) who have behavior problems. These interventions may include providing them with positive and supportive attention, monitoring, education, and other services to address their behavior problems. These programs might be evaluated to assess not only whether such interventions reduce the incidence of negative behaviors such as delinquency and/or substance abuse but whether they reduce unprotected sexual intercourse as well. In addition, to assess the impact of providing meaningful activities to unoccupied, unsupervised teens, an experimental study could be conducted in which an array of engaging, developmentally appropriate and meaningful opportunities are provided to adolescents who otherwise would not have such opportunities available to them. Adolescents who apply to participate in special activities such as sports teams could be randomly assigned to experimental and control groups.

Access to medical services, education, and counseling are often presumed to affect whether adolescents obtain methods of contraception. Random assignment strategies can also be implemented to empirically test the accessibility hypothesis. Experimental studies of the impact of sex education and contraceptive care can be implemented in a variety of settings. In addition to studies in clinics, physicians in private or group practice or HMOs might be randomly assigned to receive special education and training to enable them to initiate discussions about sex, contraception, and pregnancy with adolescent patients. A control group of physicians would receive no special training. The impact of this special training for providers on the timing of sexual initiation, use of contraception, and the occurrence of pregnancy could be examined by conducting interviews and/or by examining medical records. Alternatively, schools with school-based health clinics might randomly select a sub-sample of students to receive special intensive outreach, education, counseling, and follow-up services, while a control group would have access to the usual, less-intensive array of services provided by the school-based clinic, to assess the impact of these more intensive services on sexual and contraceptive behavior and on pregnancy. A possible way to allocate already limited supplies of Norplant® is randomly choosing the patients who will receive Norplant®. Thus, among clinic patients seeking Norplant®, some adolescents could be randomly selected to receive Norplant®; control subjects could be provided with their second choice method. Over time, outcomes such as subjective satisfaction with contraceptive method, the incidence of method discontinuation, the occurrence of pregnancy, and the occurrence of sexually transmitted infections could be tracked. A similar study could be conducted with Depo-Provera®.

Strong families are an important factor in preventing sexual risk-taking behavior, and organized programs should be seen as a complement to socialization within the home. Policies and programs can inform and empower families. In addition, programs should involve families and enlist their help and support. Numerous studies indicate that adolescents from troubled and disorganized families are more likely to be at risk of early parenthood and to become teen parents, yet few experimental interventions have focussed on the family in pregnancy prevention interventions. In these cases a program could help improve outcomes. A potential family-oriented intervention, with an experimental evaluation design, could focus on families with adolescents, or even children who have chronic behavior problems and/or serious academic problems. These families might be randomly assigned to receive sustained special services, including family counseling and parenting classes, to address the academic problems of the youth in the school setting and/or to assist the family in addressing the behavior problems of the youth as well. The impact of this intervention on sexual activity and/or contraceptive use, as well as academic and behavior problems, would be compared for the control versus the experimental groups.

Recognizing that experimental designs with randomly assigned experimental and control groups are sometimes impossible for researchers to fund or conduct, we suggest that carefully implemented quasi-experimental designs may also provide useful information. However, evaluations that allow for the explicit comparison of various program components are needed. It will be critical in the coming years to understand which aspects of pregnancy prevention programs demonstrate the strongest impacts and at which transition stage -- onset of sex or effective use of contraception -- impacts can be observed. Such information could suggest where to focus scarce prevention resources. Programs could also be evaluated to identify the relative impact of various types of intervention modalities. For instance, strategies could explore the relative importance of improved communication skills, versus access to contraceptive services, versus the presence of an apprenticeship or work-study component.

In addition, there is a need for successful interventions, once identified, to be tested within a wide variety of populations, particularly communities that are diverse as to ethnicity and socioeconomic status. There is a need to target and successfully intervene among high-risk, and ethnically diverse youth in ways that are culturally appropriate and that can secure and maintain active participation from youth and their local communities. Evaluations are needed that compare the effectiveness of different strategies for implementing the same program component. Improved utilization of family planning services could be addressed simultaneously by the involvement of parents or a teen outreach worker and more focussed or intensive education/counseling sessions. A better understanding of the relative importance of various program components may suggest emphasizing some approaches more than others. Such efforts will help identify the most effective and efficient ways to intervene and ultimately lead to informed national-level policy for the coming decade.

In conclusion, while each research approach has a set of strengths and weaknesses, the most definitive results will be based on experimental studies. Implementation of a systematic, well planned and well-designed interventions combined with rigorous experimental evaluations could bring useful knowledge to future debates on how to prevent teenage parenthood. Much time has been lost because innovative and potentially helpful intervention approaches have not been evaluated with rigorous scientific methods. Rather than continuing previous practices of funding small, short-term, *ad hoc* programs which cannot support rigorous evaluation studies, or funding strong programs without equally strong evaluations, it is time to also conduct a limited set of well-designed, carefully-implemented intervention programs, with solid evaluations that yield a strong basis for future policy making.

BIBLIOGRAPHY

Advocates for Youth (formerly Center for Population Options. 1993. "Meeting report: New research on African-American youth: Implications and applications." Washington, DC: Advocates for Youth.

Ajzen, I. 1991. "The theory of planned behavior." Organizational Behav Hum Decis Process. 50:179-211.

Ajzen, I. and Fishbein, M. 1977. "Attitude-behavior relations: A theoretical analysis and review of empirical research." Psychological Bulletin 84(5):888-918.

Alan Guttmacher Institute. 1989. "Risk and responsibility: Teaching sex education in American schools today." New York, NY: AGI.

Allen, J.P., Kuperminc, G., Philliber, S., and Herre, K. 1994. "Programmatic prevention of adolescent problem behaviors: The role of autonomy, relatedness, and volunteer service in the Teen Outreach Program." American Journal of Community Psychology 22:617-638.

Allen, J.P., Philliber, S. and Hoggson, N. 1990. "School based prevention of teenage pregnancy and school dropout: Process evaluation of the national replication of the Teen Outreach Program." American Journal of Community Psychology 18(4): 505-524.

Allen-Meares, P. 1991. "Educating adolescents on the dangers of premature childbearing and drug use: A focus on prevention." Child and Adolescent Social Work Journal 8(4): 327-338.

Anastasiow, N. J. 1987. "Programs developed in response to teen pregnancies." Infant Mental Health Journal 8(1): 65-75.

Archer, E. and Cahill, M. 1991. "Building Life Options: School-community collaboration for pregnancy prevention in the middle grades." New York, NY: Academy for Educational Development.

Arkansas Department of Health. 1994. "Family Planning Program: Progress report of program year 1993/1994, narrative." Little Rock, AR: Division of Reproductive Health, Arkansas Department of Health.

Armstrong, K.A. and Stover, M.A. "Smart Start: An option for adolescents to delay the pelvic exam and blood work in family planning clinics." Philadelphia, PA: Family Planning Council of Southeastern Pennsylvania.

Asante, M.K. 1987. The Afrocentric Idea. Philadelphia, PA: Temple University Press.

Asante, M.K. 1982. Afrocentricity. Trenton, NJ: Africa World Press, Inc.

Babbie, E. 1989. The Practice of Social Research. Belmont, CA: Wadsworth Publishing Company.

Baker, J., Zellman, G.L., Capers, C., Martin, H.P., and Eisen, M. 1985. "Teen Talk: Training manual for interviewing teens." Program Archive on Sexuality, Health, & Adolescence, Sociometrics Corporation.

Bane, M.J. 1994. Memo announcing availability of FY 94 grant funds for Home Visitor Program. Assistant Secretary for Children and Families.

Bandura, A. 1986. Social Foundations of Thought and Action. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. 1977. Social Learning Theory. Englewood Cliffs, NJ: Prentice-Hall.

Banks, I.W. and Wilson, P.I. 1989. "Appropriate sex education for black teens." Adolescence 24(93): 233-245.

Barth, R.P., Leland, N., Kirby, D., and Fetro, J.V. 1992. "Enhancing social and cognitive skills." In Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J. Preventing Adolescent Pregnancy (pp.53-82). Newbury Park, CA: Sage Publications.

Bartels, C.L., Limber, S.P., O'Beirne, H. and Wilcox, B.L. 1994. "Federally funded abstinence-only sex education programs: A meta-evaluation." Presented at the Biennial Meetings of the Society for Research on Adolescence, San Diego, CA.

Baumrind, D. 1982. "Are androgynous individuals more effective persons and parents?" Child Development 53:44-75.

Benn, L., Weed, S., and Tanas, R. 1994. "Prevention in focus: A conference summary." Teen Aid, Inc: Spokane, WA.

Billy, J.O.G., Grady, W.R., Moore, D.E., and Brewster, K.L. 1993. "Contextual effects on adolescent sexual behavior," Final Report to the Office of Population Affairs.

Bloom, D., Fellerath, V., Long, D., and Wood, R.G. 1993. "LEAP: Interim findings on a welfare initiative to improve school attendance among teenage parents." New York, NY: Manpower Research Demonstration Corporation.

Bloom, D., Kopp, H., Long, D., and Polit, D. 1991. "LEAP: Implementing a welfare initiative to improve school attendance among teenage parents, Ohio's Learning, Earning, and Parenting Program." New York, NY: Manpower Research Demonstration Corporation.

Brewster, K. 1994. "Race differences in sexual activity among adolescent women: The role of neighborhood characteristics." American Sociological Review 59:408-424.

Brindis, C.D. 1992. "A compelling case for comprehensive prevention efforts." Family Planning Perspectives 24(5): 230-231.

Brindis, C. and Eisen, M. 1993. "A minimum data set for evaluating programs aimed at preventing adolescent pregnancy." In Card, J.J. (Ed.). Handbook of Adolescent Sexuality and Pregnancy: Research and Evaluation Instruments. Newbury Park, CA: Sage Publications.

Brindis, C., Starbuck-Morales, S., Wolfe, A.L., and McCarter, V. 1994. "Characteristics associated with contraceptive use among adolescent females in school-based family planning programs." Family Planning Perspectives 26(4): 160-164.

Bronfenbrenner, U. 1979. The Ecology of Human Development: Experiments by Nature and Design. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. and Crouter, A. 1982. "Work and family through time and space". In S.B. Kamerman and C.D. Hayes (Eds.). Families That Work: Children in a Changing World. National Research Council, Washington, DC: National Academy Press.

Burt, M.R., Aron, L.Y., and Schack, L.R. 1994. "Family planning clinics: Current status and recent changes in services, clients, staffing, and income sources." Washington, DC: Urban Institute and Child Trends, Inc.

Burt, Kimmich, Goldmuntz, and Sonenstein. 1984. "Helping pregnant adolescents: Outcomes and costs of service delivery." Final report on the evaluation of adolescent pregnancy programs.

Byrne, D., Kelley, K., and Fisher, W.A. 1993. "Unwanted teenage pregnancies: Incidence, interpretation, and intervention." Applied and Preventive Psychology 2: 101-113.

California Department of Health Services, Office of Family Planning. 1994. "Education Now and Babies Later (ENABL): Postponing sexual involvement through education." Descriptive materials.

California Wellness Foundation. 1994. Annual Report. Woodland Hills, CA.

Card, J.J. 1988. "Executive summary." Pp. 1-19 in J.J. Card (Ed.). Evaluating and Monitoring Programs for Pregnant and Parenting Teens. Palo Alto: Sociometrics Corporation.

Card, J.J., Peterson, J.L., and Greeno, C.G. 1992. "Adolescent pregnancy prevention programs." pp. 1-26 in Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J.L. (Eds.). Preventing Adolescent Pregnancy. Newbury Park, CA: Sage Publications.

Card, J.J. and Reagan, R. 1989. "Strategies for evaluating adolescent pregnancy programs." Family Planning Perspectives 21: 27-32.

Carrera, M. A. 1992. "Involving adolescent males in pregnancy and STD prevention programs." Adolescent Medicine: State of the Art Reviews 3(2): 269-281.

Carrera, M.A. and Dempsey, P. 1994. "Carrera/Dempsey replication programs: 1993-94 summary of client characteristics and outcomes." Philliber Research Associates.

Carrera, M.A. and Dempsey, P. 1988. "Restructuring public policy priorities on teen pregnancy: A holistic approach to teen development and teen services." SIECUS report, January/February: 6-9.

Carrera, M.A., Dempsey, P., Philliber, W., and Philliber, S. 1992. "Evaluating a comprehensive pregnancy prevention program." FLEducator, Fall: 4-9.

Center for the Study of Social Policy. 1995. "Building new futures for at-risk youth: Findings from a five year, multi-site evaluation." Washington, DC: CSSP.

Chase-Lansdale, P.L., Brooks-Gunn, J., and Paikoff, R.L. 1991. "Research and programs for adolescent mothers: Missing links and future promises." Family Relations 40(4): 396-403.

Children's Defense Fund. 1988. "What about the boys: Teenage pregnancy prevention strategies." Washington, DC: Children's Defense Fund.

Christopher, F.S. and Roosa, M.W.. 1990. "An evaluation of an adolescent pregnancy prevention program: Is "Just Say No" enough?" Family Relations 39: 68-72.

Clewell, Brooks-Gunn, and Benasich. 1989. "Evaluating child-related outcomes of teenage parenting programs." Family Relations 38: 201-209.

Cook, T.D. and Campbell, D.T. 1979. Quasi-experimentation: Design and Analysis Issues for Field Settings. Chapter 3, pp. 95-146. Boston, MA: Houghton Mifflin Co.

Currie, J. And Thomas, D. 1994. "Does Head Start make a difference?" Unpublished manuscript. University of California, Los Angeles, NBER, and RAND.

Danielson, R., Marcy, S., Plunkett, A., Wiest, W., and Greenlick, M.R. 1990. "Reproductive health counseling for young men: What does it do?" Family Planning Perspectives 22: 115-121.

Dawson, D.A. 1986. "The effects of sex education on adolescent behavior." Family Planning Perspectives 18(July/Aug):162-170.

Department of Health and Human Services. 1988. "Adolescent Family Life Demonstration Projects: Program and evaluation summaries." Washington, DC: DHHS.

Delgado, D. 1994. "The Annie E. Casey Foundation's Plain Talk Initiative." PSAY Network 2(4): 1,12.

Donahue, M.J. 1987. "Technical report of the national demonstration project field test of Human Sexuality: Values and Choices." Minneapolis, MN: Search Institute.

Donovan, P. 1992a. "Delaying pelvic exams to encourage contraceptive use." Family Planning Perspectives 24(3): 136, 144.

Donovan, P. 1992b. "Abortion agency offers adoption services." Family Planning Perspectives 24(5): 224-225.

Donovan, P. 1991. "Family planning clinics: Facing higher costs and sicker patients." Family Planning Perspectives 23(5): 198-203.

Drolet, J.C. and Clark, K. 1994. "The sexuality education challenge: Promoting healthy sexuality in young people." Santa Cruz, CA: ETR Associates.

Dryfoos, J. 1994. "Appendix C: Effective prevention strategies: What's working?" Child Watch conference, Pasadena, CA.

Dryfoos, J. 1992. "School- and community-based pregnancy prevention programs." Adolescent Medicine: State of the Art Reviews 3(2):241-255.

Dryfoos, J. 1988. "School-based health clinics: Three years experience." Family Planning Perspectives 20: 193-200.

Earls, F., Robins, L.N., Stiffman, A.R., and Powell, J. 1989. "Comprehensive health care for high-risk adolescents: An evaluation study." American Journal of Public Health 79(8): 999-1005.

Edwards, L.E., Steinman, M.E., Arnold, K.A., and Hakanson, E.Y. 1980. "Adolescent pregnancy prevention services in high school clinics." Family Planning Perspectives 12(1): 6-14.

Eisen, M. and Zellman, G.L. 1992. "A health beliefs field experiment." In Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J.L. (Eds.). Preventing Adolescent Pregnancy. Newbury Park, CA: Sage Publications.

Eisen, M., Zellman, G., and McAlister, A. 1992. "A health belief model--social learning theory approach to adolescents' fertility control: Findings from a controlled field trial." Health Education Quarterly 19: 249-262.

Eisen, M., Zellman, G., and McAlister, A. 1990. "Evaluating the impact of a theory-based sexuality and contraceptive education program." Family Planning Perspectives 22: 261-271.

Etzioni, A. (1995). "When parents default, schools should teach character." Child Adolescent and Behavior Letter. Providence, RI: Brown University.

Firestone, W.A. 1994. "The content and context of sexuality education: An exploratory study in one state." Family Planning Perspectives 26(3).

Fishbein, M. and Ajzen, I. 1980. Understanding Attitudes and Predicting Social Behavior. Englewood Cliffs, NJ: Prentice-Hall.

Forrest, J. 1980. "Exploration of the effects of organized family planning programs in the United States on adolescent fertility." Final Report.

Forrest, J.D. and Silverman, J. 1989. "What public school teachers teach about preventing pregnancy, AIDS, and sexually transmitted diseases." Family Planning Perspectives 21: 65-72.

Forrest, J.D. and Singh, S. 1990a. "The sexual and reproductive behavior of American women. 1982-1988." Family Planning Perspectives 22: 206-214.

Forrest, J.D. and Singh, S. 1990b. "Public-sector savings resulting from expenditures for contraceptive services." Family Planning Perspectives 22(1):6-15.

Foster, H.W., Greene, L.W., and Smith, M.S. 1990. "A model for increasing access: Teenage pregnancy prevention." Journal of Health Care for the Poor and Underserved 1(1): 136-146.

Freedman, M. 1988. "Partners in growth: Elder mentors and at-risk youth." Philadelphia, PA: Public/Private Ventures.

Furstenberg, F.F., Jr., Moore, K.A., and Peterson, J.L. 1985. "Sex education and sexual experience among adolescents." American Journal of Public Health 75.

Furstenberg, F.F., Shea, J., Allison, P., Herceg-Baron, R. and Webb, D. 1983. "Contraceptive continuation among adolescents attending family planning clinics." Family Planning Perspectives 15(5): 211-217.

Gibson, J.W. 1987. "Executive summary: Inwood Teen Choice--A joint Columbia University - Inwood House research and demonstration project in the primary prevention of adolescent pregnancy."

Gilchrist, LD, and Schinke, SP. 1983. "Coping with contraception: Cognitive and behavioral methods with adolescents." Cognitive Therapy and Research 7(5): 379-388.

Girls, Inc. 1991. "Truth, trust, and technology: New research on preventing adolescent pregnancy." New York, NY: Girls, Inc.

Geronimus, Arline, T. 1987. "Teenage maternity and neonatal mortality: A new look at American patterns and their implications for developing countries." Discussion paper 87-3. Cambridge, MA: Center for Population Studies, Harvard University.

Gray, W.R., Klepinger, D.H. and Billy, J.O.G. 1993. "The influence of community characteristics on the practice of effective contraception." Family Planning Perspectives 25(1): 4-11.

Green, L. 1975. "Diffusions and adoption of innovations related to cardiovascular risk behavior in the public." In Enelow, A.J. and Henderson, J.B. (Eds.). Applying behavior science to cardiovascular risk. New York, NY: American Heart Association.

Green, S.K., and Sollie, D.L. 1989. "Long term effects of a church-based sex education program on adolescent communication." Family Relations 38: 152-156.

Greene, L.W. 1995. Personal communication. June 14.

Greene, L.W., Smith, M.S., and Peters, S.R. (1995). "'I Have a Future' comprehensive adolescent health promotion: Cultural considerations in program implementation and design". Journal of Health Care for the Poor and Underserved, June, 267-281.

Greenberg, D., Meyer, R., and Wiseman, M. 1994. "When one demonstration site is not enough." Institute for Research on Poverty.

Grossman, J.B. and Sipe, C.L. 1992. "Summer training and education program (STEP): Report on long-term impacts." Philadelphia, PA: Public/Private Ventures.

Haber, J. 1991. "Poor people and poor places: Deciphering neighborhood effects on poverty outcomes." Macro-microlinkages in sociology. Newbury Park, CA: Sage Publications.

Hahn, A. (June 1994). "Evaluation of the Quantum Opportunities Program (QOP): Did the program work?" Executive Summary. Waltham, MA: Brandeis University.

Hanson, S.L. 1992a. "Involving families in programs for pregnant teens: Consequences for teens and their families." Family Relations 41: 303-311.

Hanson, S.L. 1992b. "Involving families in programs for pregnant adolescents: Practices and obstacles." Families in Society 73(5): 274-281.

Hardy, J.B., King, T.M., and Repke, J.T. 1987. "The John's Hopkins Adolescent Pregnancy Program: An evaluation." Obstetrics and Gynecology 69: 300-306.

Harriman, L.C., Wilson, E., and Hale, D.E. 1989. "Cooperative extension programs in teen parenting and pregnancy prevention." Journal of Home Economics 81: 25-39.

Haskins, R. 1989. "Beyond metaphor: The efficacy of early childhood education." American Psychologist 44(12):274-282.

Hauser, D. and Peak, G. 1993. "Do school-based clinics reduce birthrates?" Family Planning Perspectives 25(3).

Hauser, D. and Michaud, P.A. 1994. "Does a condom-promoting strategy (the Swiss STOP-AIDS Campaign) modify sexual behavior among adolescents?" Pediatrics 93(4): 580-585.

Heckman, J. 1980. "Sample selection bias as a specification error." In E.W. Stromsdorfer and G. Farkas (Eds.), Evaluation Studies Review Annual. Vol. 5, pp. 60-74. Beverly Hills, CA: Sage Publications.

Heckman, J. 1979. "Sample selection bias as a specification error." Econometrics, January.

Heckman, J.J. and Hotz, V.J. 1989. "Choosing among alternative nonexperimental methods for estimating the impact of social programs: The case of Manpower training." Journal of the American Statistical Association 84(408): 862-880 (with discussion).

Herceg-Baron, R., Furstenberg, F.F., Shea, J. and Harris, K.M. 1986. "Supporting teenagers' use of contraceptives: A comparison of clinic services." Family Planning Perspectives 18(2): 61-66.

Hill, B., Allen, S., and Eisen, M. 1985. "Teen Talk: Reproduction and contraception curriculum." Program Archive on Sexuality, Health, & Adolescence, Palo Alto, CA: Sociometrics Corporation.

Hofferth, S.L. 1991. "Programs for high risk adolescents: What works?" Evaluation and Program Planning 14(1-2): 3-16.

Hofferth, S.L. and Miller, B.C. 1989. "An overview of adolescent pregnancy prevention programs and their evaluations." Pp. 25-40 in J.J. Card (Ed.). Evaluating Programs Aimed at Preventing Teenage Pregnancies. Palo Alto: Sociometrics Corporation.

Hotz, V.J. 1990. "Recent experience in designing evaluations of social programs: The case of the national JTPA study." Presented at the IRP-ASPE Conference on Evaluation Design for Welfare and Training Programs, April 19-21, Arlie, VA.

Howard, M. 1992. "Delaying the start of intercourse among adolescents." Adolescent Medicine: State of the Art Reviews 3(2): 181-193.

Howard, M. and McCabe, J.B. 1992. "An information and skills approach for younger teens: Postponing sexual involvement program." In Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J. (Eds.). Preventing Adolescent Pregnancy. Newbury Park, CA: Sage Publications.

Howard, M. and McCabe, J.B. 1990. "Helping teenagers postpone sexual involvement." Family Planning Perspectives 22: 21-26.

Huberman, B. 1995. Presentation at "Welfare reform in the 104th Congress: Goals, Options and Tradeoffs" Forum, cosponsored by the Institute for Research on Poverty and the Family Impact Seminar, Washington, D.C.

Hughes, M.E., Furstenberg, F.F., Jr., and Teitler, J.O. 1995. "The impact of an increase in family planning services on the teenage population of Philadelphia." Family Planning Perspectives 27(2): 60-65, 78.

Hunter-Geboy, C., Peterson, L., Casey, S., Hardy, L., and Renner, S. 1985. "Life planning education: A youth development program." Washington, DC: Center for Population Options.

Isberner, F.R. and Wright, W.R. 1988. "Sex education in Illinois churches: The OCTOPUS program." Journal of Sex Education and Therapy 14(2): 29-33.

Janz, N. and Becker, M. 1984. "The health belief model: A decade later." Health Education Quarterly 11:1-47.

Jemmott, J.B., Jemmott, L.S., and Fong, G.T. 1992. "Reductions in HIV risk-associated sexual behaviors among black male adolescents: Effects of an AIDS prevention intervention." American Journal of Public Health, 82(3):372-377.

Jorgensen, S.R. 1993. "Project Taking Charge: Six-month follow-up of a pregnancy prevention program for early adolescents." Family Relations 42: 401-4066.

Jorgensen, S.R. 1991. "Project Taking Charge: An evaluation of an adolescent pregnancy prevention program." Family Relations 40(4): 373-380.

Joshi, N.P. and Battle, S.F. 1990. "Adolescent fathers: An approach for intervention." Journal of Health and Social Policy 1(3): 17-33.

Juzang, I. 1993. Presentation of the finding from The MEE Report: Reaching the HipHop Generation. Meeting Report, New Research on African American youth: Implications and applications, June 30 and July 1. Washington, DC: Advocates for Youth (formerly Center for Population Options).

Kar, S.B. 1977. "Community interventions in health and family planning programs: A conceptual framework." International Journal of Health Education 10(1, supplement).

Kelly, M. 1988. "Teamwork: A city's response to adolescent pregnancy (Norfolk, VA)." Journal of Home Economics 80: 19-23.

Joseph P. Kennedy, Jr. Foundation. "A Community of Caring: Teacher's guide." Washington, DC: Author.

Joseph P. Kennedy, Jr. Foundation. 1982. "A Community of Caring." Washington, DC: Author.

Kenney, A.M., Guardado, S. and Brown, L. 1989. "Sex education and AIDS education in schools: What states and large districts are doing." Family Planning Perspectives 21: 56-64.

Kirby, D. 1994. "School-based programs to reduce sexual risk-taking behaviors: Sexuality and HIV/AIDS education, health clinics, and condom availability programs." (submitted to Public Health Reports).

Kirby, D. 1990. "Research methods for assessing and evaluating school based clinics." Washington, DC: Center for Population Options.

Kirby, D., Barth, R.P. , Leland, N., and Fetro, J.V. 1991. "Reducing the Risk: Impact of a new curriculum on sexual risk taking." Family Planning Perspectives 23: 253-263.

Kirby, D. and Coyle, K. 1994. "Changing risk-taking behavior: Preliminary conclusions from research." Pp. 605-626 in Drolet, J.C. and Clark, K. The Sexuality Education Challenge: Promoting Healthy Sexuality in Young People.

Kirby, D., Harvey, P., Claussenius, D., and Novar, M. 1988. "A direct mailing to teenage males: Its impact on knowledge, attitudes, and sexual behavior." Family Planning Perspectives 21(1): 12-18.

Kirby, D., Resnick, M.D., Downes, B., Kocher, T., Gunderson, P., Potthoff, S., Zelterman, D. and Blum, R.W. 1993. "The effects of school-based health clinics in St. Paul on school-wide birthrates." Family Planning Perspectives 25(1): 12-16.

Kirby, D., Short, L., Collins, J., Rugg, D., Kolbe, L., Howard, M., Sonenstein, F., and Zabin, L. (1994, May-June). "School-based programs to reduce sexual risk behaviors: A review of effectiveness." Public Health Reports 109(3): 339-360.

Kirby, D. and Waszak, C. 1992. "School-based clinics." Pp. 185-219 in Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J. (Eds.). Preventing Adolescent Pregnancy. Newbury Park, CA: Sage Publications.

Kirby, D., Waszak, C., and Ziegler, J. 1991. "Six school-based clinics: Their reproductive health services and impact on sexual behavior." Family Planning Perspectives 23(1): 6-16.

Kisker, E.E., Brown, R.S., and Hill, J. 1994. "Healthy Caring: Outcomes of the Robert Wood Johnson Foundation's school-based adolescent health care program." Princeton, NJ: Mathematica Policy Research, Inc.

Klein-Walker, D., and Mitchell, A. 1988. "Evaluation for the Too-Early-Childbearing Programs." Pp. 119-134 in J.J. Card (Ed.), Evaluating and Monitoring Programs for Pregnant and Parenting Teens. Palo Alto: Sociometrics Corporation.

Klerman, L.V. and Horwitz, S.M. 1992. "Reducing the adverse consequences of adolescent pregnancy and parenting: The role of service programs." Adolescent Medicine: State of the Art Reviews 3(2):299-316.

Koo, H.P., Dunteman, G.H., George, C., Green, Y. and Vincent, M. 1994. "Reducing adolescent pregnancy through a school- and community-based intervention: Denmark, South Carolina, revisited." Family Planning Perspectives 26(5): 206-211,217.

Koo, H.P., Dunteman, G.H., Gogan, H., Johnson, J., Spruyt, A., Cook, T.J., Braddy, B., and White, R. 1990. "Reanalysis of changes in teenage pregnancy rates in Denmark area and comparison counties. Evaluation of the South Carolina School/Community intervention to reduce unintended adolescent pregnancy." Unpublished manuscript.

Koshel, J.J. 1990. "An overview of state policies affecting adolescent pregnancy and parenting." Washington, DC: National Governors' Association.

Kraemer, H.C. and Thiemann, S. 1989. "How many subjects? Statistical power analysis in research." Newbury Park, CA: Sage Publications.

Kuziel-Perri, P. and Snarey, J. 1991. "Adolescent repeat pregnancies: An evaluation study of a comprehensive service program for pregnancy and parenting black adolescents." Family Relations 40(4): 381-385.

Lancaster, J. 1994. "Media become message in fight to curb births: Actors, athletes used in sophisticated TV campaigns that have been a surprising success." Article in the Washington Post.

Laracy, M.C. 1994. "The jury is still out: An analysis of the purported impact of New Jersey's AFDC child exclusion ("Family Cap") Law." Center for Law and Social Policy: Washington, DC.

Leitch, M.L., Gonzalez, A.M., and Ooms, T.J. 1993. "Involving unwed fathers in adoption counseling and teen pregnancy programs." In Lerman, R.I. and Ooms, T.J. (Eds.). Young Unwed Fathers: Changing Roles and Emerging Policies. Philadelphia, PA: Temple University Press.

Lewis, O. 1968. "The culture of poverty," Pp. 187-200 in D.P. Moynihan (Ed.). On Understanding Poverty: Perspectives from the Social Sciences. New York, NY: Basic Books.

Lewis, O. 1966. La Vida: A Puerto Rican Family in the Culture of Poverty--San Juan and New York." New York, NY: Random House.

Lewis, O. 1961. The Children of Sanchez." New York, NY: Random House.

Lewis, O. 1959. "Five Families: Mexican Case Studies in the Culture of Poverty." New York, NY: Basic Books.

BEST COPY AVAILABLE

Lewis, C., Battistich, V. and Schaps, E. 1990. "School based primary prevention: What is an effective program?" New Directions for Child Development, Winter No. 50: 35-59.

Liburd and Bowie. 1989. "Intentional teenage pregnancy: A community diagnosis and action plan." Health Education 20: 33-38 (special issue).

Lustig, S.L. 1994. "The AIDS prevention magic show: Avoiding the tragic with magic." Public Health Reports, DHHS.

Males, M. 1993. "School-age pregnancy: Why hasn't prevention worked?" Journal of School Health 63(10): 429-432.

Marks, E.L. and Marzke, C.H. 1993. "Healthy Caring: A process evaluation of the Robert Wood Johnson Foundation's School-based adolescent health care program." Princeton, NJ: Mathtech, Inc.

Marsh, J.C. and Wirick, M.A. 1991. "Evaluation of Hull House teen pregnancy and parenting program." Evaluation and Program Planning 14(1-2): 49-61.

Marsiglio, W. and Mott, F.L. 1986. "Impact of sex education on sexual activity, contraceptive use and premarital pregnancy among American teenagers." Family Planning Perspectives, 18:(July/Aug), 151-162.

Maynard, R.A. 1994a. "The effectiveness of interventions aimed at reducing the incidence of teenage pregnancy and mitigating the consequences of early childbearing." Unpublished manuscript.

Maynard, R.A. 1994b. "Summary: Teenage childbearing and welfare reform: Lessons from a decade of demonstration and evaluation research." Statement for the Committee on Ways and Means, Subcommittee on Human Resources, U.S. House of Representatives, Hearing on Early Childbearing.

Maynard, R.A. (Ed.). 1993. "Building self-sufficiency among welfare-dependent teenage parents: Lessons for the Teenage Parent Demonstration." Princeton, NJ: Mathematica Policy Research, Inc.

Maynard, R., Nicholson, W., and Rangarajan, A. 1993. "Breaking the cycle of poverty: The effectiveness of mandatory services for welfare-dependent teenage parents". Princeton, NJ: Mathematica Policy Research, Inc.

Maynard, R. and Rangarajan, A. 1994. "Contraceptive use and repeat pregnancies among welfare-dependent teenage mothers." Family Planning Perspectives 26(5): 198-205.

McAlister, A.L. 1983. "Teen Talk: Group discussion curriculum guide." Program Archive on Sexuality, Health, & Adolescence, Palo Alto, CA: Sociometrics Corporation.

McAnarny, E.R. and Hendee, W.R. 1989. "The prevention of adolescent pregnancy." Journal of the American Medical Association July 7, p.78.

McBride, D. 1988. "The adolescent family life demonstration program: Evaluation component." Pp. 71-88 in J.J. Card (Ed.). Evaluating and Monitoring Programs for Pregnant and Parenting Teens. Palo Alto, CA: Sociometrics Corporation.

McCullough, M. and Scherman, A. 1991. "Adolescent pregnancy: Contributing factors and strategies for prevention." Adolescence 26(104): 809-818.

McGuire, W. 1964. "Inducing resistance to persuasion." Pp. 191-229 in L. Berkowitz (Ed.). Advances in Experimental Social Psychology. New York, NY: Academic Press.

McKinney, D.H. and Peak, G.L. 1993. "School-based and school-linked health centers: Update 1993." Washington, DC: Center for Population Options.

McLaughlin, S.D. 1992. "The relationship of client and project characteristics to the relinquishment rates of AFL care demonstration projects." Final Report to Office of Population Affairs. Seattle, WA: Battelle Human Affairs Research Centers.

McLaurin, P. and Juzang, I. 1993. "Reaching the Hip-Hop generation." FOCUS: A guide to AIDS Research and Counseling 8(3):1-4.

Metzger, K.R. 1994. "The Medicaid abortion ban in Michigan--four years later." PSAY Network 2(1): 1-4.

Meyer, V.F. 1991. "A critique of adolescent pregnancy prevention research: The invisible white male." Adolescence 26(101): 217-222.

Meyer, J., Sullivan, S., and Silow-Carroll, S. 1991. "New futures in Dayton: A mid-point assessment." Washington, DC: The Center for the Study of Social Policy.

Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J.L. (Eds.). 1992. Preventing adolescent pregnancy: Model programs and evaluations. Newbury Park, CA: Sage Publications.

Miller, B.C. and Dyk, P.H. 1991. "Community of Caring effects on adolescent mothers: A program evaluation case study." Family Relations 40(4): 386-395.

Miller, B.C., Norton, M.C., Jenson, G.O., Lee, T.R., Christopherson, C., and King, P.K. 1993. "Pregnancy prevention programs, impact evaluation of facts and feelings, a home based video sex education curriculum." Family Relations 42(4): 392-400.

Mitchell, A.M., and Walker, D.K. 1988. "Impact evaluation of too early childbearing programs." Los Alamitos, CA: Southwest Regional Laboratory.

Moore, K.A. 1995. "Testimony before United States Senate Committee on Finance", March 14, 1995.

Moore, K.A., Blumenthal, C., Sugland, B.A., Hyatt, B., Snyder, N., and Morrison, D.R. 1994. "State variation in rates of adolescent pregnancy and childbearing." Washington, DC: Child Trends, Inc.

Moore, K.A. and Burt, M.R. 1982. Private Crisis, Public Cost: Policy Perspectives on Teenage Childbearing. Washington, DC: The Urban Institute Press.

Moore, K.A., Miller, B., Glei, D.A., and Morrison, D.R. 1995. "Adolescent sex, contraception, and childbearing: A review of recent research." Draft report to ASPE, U.S. Department of Health and Human Services. Washington, DC: Child Trends, Inc.

Moore, K.A., Morrison, D.R., and Glei, D.A. 1995. "Welfare and adolescent sex: The effects of family history, benefit levels, and community context." Forthcoming in Journal of Family and Economic Issues.

Moore, K.A., Simms, M.C., and Betsey, C.L. 1986. Choice and Circumstances: Racial Differences in Adolescent Sexuality and Fertility. New Brunswick, NJ: Transaction Books.

Moore, K.A. and Synder, N. 1994. "Facts at a glance" -- Annual newsletter on teen pregnancy. Washington, DC: Child Trends, Inc.

Moore, K.A., Snyder, N., and Glei, D.A. 1995. "Facts at a glance" -- Annual newsletter on teen pregnancy. Washington, DC: Child Trends, Inc.

Mosher, W.D. 1990. "Use of family planning services in the United States: 1982 and 1988." Advance Data, No. 184, Vital and Health Statistics of the National Center for Health Statistics, U.S. Department of Health and Human Services.

Motivational Education Entertainment (MEE). 1992. "Reaching the Hip-Hop Generation." Philadelphia, PA: MEE.

Moynihan, D.P. 1965. "Employment, income and the ordeal of the Negro family." In T. Parsons & K.B. Clark (Eds.). The Negro American. Boston, MA: Beacon Press.

Moyse-Steinberg, D. 1990. "A model for adolescent pregnancy prevention through the use of small groups." Social Work with Groups 13(2): 57-88.

Mueller, D.P. and Higgins, P.S. 1989. "Prevention programs in human services." PP. 1-24 in J.J. Card (Ed.). Evaluating Programs Aimed at Preventing Teenage Pregnancies, Palo Alto, CA: Sociometrics Corporation.

Murray, C. 1984. Losing Ground: American Social Policy, 1950-1980. New York, NY: Basic Books, Inc.

Musick, J.S. 1991. "The high-stakes challenge of programs for adolescent mothers." In P.B. Edelman and J. Ladner (Eds.). Adolescence and Poverty: Challenge for the 1990s. Center for National Policy Press: Washington, DC.

Musick, J.S., and Halpern, R. 1989. "Giving children a chance: What role community-based parenting interventions?" Pp. 177-194 in G. Miller (Ed.). Giving Children a Chance: The Case for More Effective National Policies. Center for National Policy Press: Washington, DC.

Musick, J.S. and Stott, F.M. 1990. "Paraprofessionals, parenting, and child development: Understanding the problems and seeking solutions." Pp. 651-667 in S.J. Meisels and J.P. Shonkoff (Eds). Handbook of Early Childhood Intervention. Cambridge University Press: Cambridge.

Namerow, R. and Philliber, S. 1982. "The effectiveness of contraceptive programs for teenagers." Journal of Adolescent Health Care 2: 189-192.

Namerow, P.B., Weatherby, N. and Williams-Kaye, J. 1989. "The effectiveness of contingency-planning counseling." Family Planning Perspectives 21(3).

National Institutes of Health. Minority youth health behavior research: The development and evaluation of interventions. Descriptive materials. Bethesda, MD: Author.

Nelson, B.A. 1989. "A comprehensive program for pregnant adolescents: Parenting and prevention." Child Welfare 68:57-60.

Nicholson, H.J. and Postrado, L.T. 1992. "A comprehensive age-phased approach: Girls Incorporated." Pp. 110-138 in Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J. (Eds.). Preventing Adolescent Pregnancy. Newbury Park, CA: Sage Publications.

Olds, D.L. 1988. "The prenatal/early infancy project." In R.H. Price, E.L. Cowen, R.P. Lorion, and J.Ramos-McKay (Eds.) 14 Ounces of Prevention. Washington, DC: American Psychological Association.

Olds, D.L., Henderson, C.R., Jr., Tatelbaum, R., and Chamberlin, R. 1988. "Improving the life-course development of socially disadvantaged mothers: A randomized trial of nurse home visitation." American Journal of Public Health 78(11):1436-1445.

Olsen, R.J. and G. Farkas. 1990. "The effect of economic opportunity and family background on adolescent cohabitation and childbearing among low-income blacks." Journal of Labor Economics 8:341-362.

Olsen, J.A., Weed, S.E., Ritz, G.M. and Jensen, L.C. 1991. "The effects of three abstinence sex education programs on student attitudes toward sexual activity." Adolescence 26(103): 631-641.

Ooms, T. and Herendeen, L. 1990. "Teenage pregnancy prevention programs: What have we learned?" Meeting highlights and background briefing report. Report of a family impact seminar (Wash, D.C. May 26, 1989). Family Impact Seminar, 1100 17th St, NW, Suite 901, Washington, DC 200036.

Paikoff, R.L. and Brooks-Gunn, J. 1991. "Taking fewer chances: Teenage pregnancy prevention programs." American Psychologist.

Patterson, D. 1990. "Gaining access to community resources: Breaking the cycle of adolescent pregnancy." Journal of Health Care for the Poor and Underserved 1(1): 147-149.

Peters, S. et al. 1991. "Teenage pregnancy prevention." Journal of Health Care for the Poor and Underserved 2(1): 7-10.

Peterson, J.L., Card, J.J., Eisen, M.B., and Sherman-Williams, B. 1994. "Evaluating teenage pregnancy prevention and other social programs: Ten stages of program assessment." Family Planning Perspectives 26(3): 116-131.

Perez, S.M. and Duany, L.A. 1992. "Reducing Hispanic teenage pregnancy and family poverty: A replication guide." Washington, DC: Policy Analysis Center.

Philliber, S. 1994. "Carrera/Dempsey replication programs: 1993-94 summary of client characteristics and outcomes." Philliber Research Associates.

Philliber, S. 1989a. "Designing and conducting impact evaluation of adolescent pregnancy prevention programs." Pp. 41-68 in J.J. Card (Ed.). Evaluating Programs Aimed at Preventing Teenage Pregnancies, Palo Alto, CA: Sociometrics Corporation.

Philliber, S. 1989b. "Evaluating your adolescent pregnancy program: How to get started." Washington, DC: Children's Defense Fund.

Philliber, S. and Allen, J.P. 1992. "Life options and community service." In Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J.L. (Eds.). Preventing Adolescent Pregnancy. Newbury Park, CA: Sage Publications.

Planned Parenthood Federation of American. Programs Database. New York, NY: Author.

Planned Parenthood of the Rocky Mountains. Dollar-A-Day Program descriptive materials. Denver, CO: Author.

Polit, D.F. 1992. "Barriers to self-sufficiency and avenues to success among teenage mothers". Princeton, NJ: Mathematica Policy Research, Inc.

Polit, D.F. 1989. "Effects of a comprehensive program for teenage parents: Five years after project redirection." Family Planning Perspectives 21(4).

Polit, D.F. 1988. "Analysis of impacts in the Project Redirection demonstration." Pp. 105-118 in J.J. Card (Ed.). Evaluating and Monitoring Programs for Pregnant and Parenting Teens (pp.105-118). Palo Alto, CA: Sociometrics Corporation.

Polit, D.F. and Kahn, J.R. 1985. "Project Redirection: Evaluation of a comprehensive program for disadvantaged teenage mothers." Family Planning Perspectives 17(4): 150-55.

Polit, D.F., Morton, T.D., and White, C.M. 1989. "Sex, contraception, and pregnancy among adolescents in foster care." Family Planning Perspectives 21(5): 203-208.

Polit, D.F., Quint, J.C., and Riccio, J.A. 1984. "The challenge of serving teenage mothers: Lessons from Project Redirection." New York: Manpower Demonstration Research Corporation.

Postrado, L.T. and Nicholson, H.J. 1992. "Effectiveness in delaying the initiation of sexual intercourse of girls aged 12-14: Two components of the Girls Incorporated Preventing Adolescent Pregnancy Program." Youth and Society 23(3): 356-379.

Public Health Service. 1990. National Health Promotion and Disease Prevention Objectives (Conference edition). Healthy People 2000. Washington, DC: U.S. Department of Health & Human Services.

Public/Private Ventures. 1995. Public/Private Ventures News. Newletter 27(Winter):6-7.

Quint, J.C., Musick, J.S., and Ladner, J.A. 1994. "Lives of promise, lives of pain: Young mothers after New Chance." New York, NY: Manpower Demonstration Research Corporation.

Quint, J.C., Polit, D.F., Bos, H., and Cave, G. 1994. "New Chance: Interim findings on a comprehensive program for disadvantaged young mothers and their children." New York, NY: Manpower Demonstration Research Corporation.

Randolph and Bogdanich. 1990. "Parents too soon: Illinois response to children having children."

Rind, P. 1992. "Peer support to keep teenage alive and well." Family Planning Perspectives 24(1): 36-40.

Roaf, P.A., Tierney, J.P., and Hunte, D.E.I. 1994. "Big brother/big sisters: A study of volunteer recruitment and screening." Philadelphia, PA: Public/Private Ventures.

Robert Wood Johnson Foundation. 1994. "Evaluation of the school-based adolescent health care program: A research dissemination meeting summary." September 23, Washington, DC.

Rogers, E.M. 1973. Communication Strategies for Family Planning. New York, NY: Free Press.

Rogers, E.M. and Shoemaker, F.F. 1971. Communication of Innovations: A Cross-Cultural Approach, 2nd ed. New York, NY: Free Press.

Romig, C.A. and Thompson, J.G. 1988. "Teenage pregnancy: A family systems approach." American Journal of Family Therapy 16: 133-145.

Roosa, M.W. 1991. "Adolescent pregnancy programs collection: An introduction." Family Relations 40(4): 370-372.

Roosa, M.W. and Christopher, F.S.. 1992. "A response to Thiel and McBride: Scientific criticism or obscurantism?" Family Relations 41: 468-469.

Roosa, M.W. and Christopher, F.S. 1990. "Evaluation of an abstinence only adolescent pregnancy prevention program: A replication." Family Relations 39: 363-367.

Rosenstock, I., Strecher, V., and Becker, M. 1988. "Social learning theory and the health belief model." Health Education Quarterly 15:175-183.

Rossi, P.H. and Freeman, H.E. 1989. Evaluation: A Systematic Approach. Fourth Edition. Newbury Park, CA: Sage Publications.

Rowitz, L., Telleen, Herzog, Gordon, Paveza, and Rydman. 1987. "Illinois Parents-Too-Soon Program Services to Pregnant and Parenting Teens: A final report of a statewide study of 21 community agencies in the Illinois Department of Children and Family Services." Chicago, IL: University of Chicago.

Ruch-Ross, H.S., Jones, E.D., and Musick, J.S. 1992. "Comparing outcomes in a statewide program for adolescent mothers with outcomes in a national sample." Family Planning Perspectives 24(2).

St. Lawrence, J.S., Brasfield, T.L., Jefferson, K.W., Alleyne, E., O'Bannon,III, R.E., and Shirley, A. 1994. "Cognitive-behavioral intervention to reduce African-American adolescents' risk for HIV infection." Unpublished manuscript.

St. Pierre, T.L., Mark, M.M., Kaltreider, D.L., and Aikin, K.J. 1995. "A 27-month evaluation of a sexual activity prevention program in boys and girls clubs across the nation." Family Relations 44:69-77.

St. Pierre, R., Goodson, B., Layzer, J., and Bernstein, L. 1994. "National impact evaluation of the Comprehensive Child Development Program." Report prepared for Administration of Children, Youth, and Families, U.S. Department of Health and Human Services. Cambridge, MA: Abt Associates Inc.

St. Pierre, R., Swartz, J., Murray, S., Deck, D., and Nickel, P. 1993. "National evaluation of the Even Start family literacy program: Report on effectiveness." Report prepared for the U.S. Department of Education, Office of Policy and Planning.

Salz, E., Perry, A. and Cabral, R. "Attacking the personal fable: Role-play and its effect on teen attitudes toward sexual abstinence." (Unpublished manuscript). Detroit, MI: Merrill-Palmer Institute, Wayne State University.

Scales, P. 1990. "Developing capable young people: An alternative strategy for prevention programs." Journal of Early Adolescence 10(4): 420-438.

Scattergood. 1990. "A taste of parenthood." American School Board Journal 177(10): 24-25.

Schinke, S.P., Blythe, B.J., and Gilchrist, L.D. 1981. "Cognitive-behavioral prevention of adolescent pregnancy." Journal of Counseling Psychology. 28(5): 451-454.

Schinke, S.P. and Gilchrist, L.D. 1984. Life Skills Counseling with Adolescents. Baltimore, MD: University Park Press.

Schinke, S.P., Gilchrist, L.D., and Small, R.W. 1979. "Preventing unwanted adolescent pregnancy: A cognitive-behavioral approach." American Journal of Orthopsychiatry 49(1): 81-88.

Schott, D. M. and Card, J.J. "User's guide to the Teen Talk Program." Program Archive on Sexuality, Health, & Adolescence, Palo Alto, CA: Sociometrics.

Schlitt, J.J., Rickett, K.D., Montgomery, L.L., and Lear, J.G. 1994. "State initiatives to support school-based health centers: A national survey." Making the Grade National Program Office: Washington, DC.

Selverstone, R. 1992. "Sexuality education for adolescents." Adolescent Medicine: State of the Art Reviews 3(2): 195-222.

Shadish, W.R., Jr. and Reis, J. 1984. "A review of the effectiveness of programs to improve pregnancy outcomes." Evaluation Review 8: 747-757.

Singh, S. 1986. "Adolescent pregnancy in the United States: An interstate analysis." Family Planning Perspectives 18(5):210-220.

Sipe, C.L., Grossman, J.B., and Milliner, J.A. 1988. "Summer training and education program (STEP): Report on the 1987 experience." Philadelphia, PA: Public/Private Ventures.

Sonenstein, F.L., Schulte, M.M., and Levine, G. 1994. "Women's perspectives on reproductive health services." Washington, DC: Urban Institute and Child Trends.

Stahler, G.J., Ducette, J., and McBride, D. 1989. "The evaluation component in adolescent pregnancy projects: Is it adequate?" Family Planning Perspectives 21(3).

Steinberg, S. 1981. The Ethnic Myth: Race, Ethnicity and Class in America. New York, NY: Atheneum.

Sugland, B.W., Moore, K.A., and Blumenthal, C. 1994. "State family planning service delivery: Administrators' perspectives on service delivery and options for future family planning services." Washington, DC: Child Trends, Inc. and Urban Institute.

Sylvester, K. 1994. "Preventable calamity: Rolling back teen pregnancy." Progressive Policy Institute. Policy Report No. 22. pg. 34. Washington, D.C.

Thiel, K.J. and McBride, D. 1992. "Comments on an evaluation of an abstinence-only adolescent pregnancy program." Family Relations 41: 465-467.

Thomas, B.H., Mitchell, A., Devlin, M.C., Goldsmith, C.H., Singer, J. and Watters, D. 1992. "Small group sex education at school." Pp.28-51 in Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J. (Eds.) Preventing Adolescent Pregnancy. Newbury Park, CA: Sage Publications.

Tienda, M. 1991. "Poor people and poor places: Deciphering neighborhood effects on poverty outcomes." In J. Huber (Ed.). Macro-Micro Linkages in Sociology. Newbury Park, CA: Sage Publications.

Tierney, J.P. and Branch, A.Y. 1992. "College students as mentors for at-risk youth." Philadelphia, PA: Public/Private Ventures.

Tiller, C. and Blanton, S.C. "Lake Cumberland District Health Department: Teen initiative/resource mother project. FY 1992-93."

True Love Waits. Descriptive materials. Nashville, TN: Author.

Trussell, J., Menken, J., Lindheim, B.L., and Vaughan, B. 1980. "The impact of restricting Medicaid financing for abortion." Family Planning Perspectives 12(3): 120-130.

Vincent, M.L., Clearie, A.F., and Schluchter, M.D. 1987. "Reducing adolescent pregnancy through school and community-based education." Journal of American Medical Association 257(4): 3382-3386.

Vincent, M. and Dod, P.S. 1989. "Community and school based interventions in teen pregnancy." Theory into Practice 28(3): 191-197.

Vincent, M.L., Lepro, E.G., Baker, S.L., and Garvey, D.G. 1991. "Projected public sector savings in a teen pregnancy prevention program." Journal of Health Education 22(4): 208-213.

Walton, F.R., Ackiss, V.D., and Smith, S.N. 1991. "Education versus schooling: Project LEAD; High Expectations." Journal of Negro Education 60(3): 441-453.

Waszak, C. and Neidell, S. 1992. "School-based and school-linked clinics: Update 1991." Washington, D.C.: Center for Population Options.

Weatherley, R.A., Perlman, S.B., Levine, M.H., and Klerman, L.V. 1986. "Comprehensive programs for pregnant teenagers and teenage parents: How successful have they been?" Family Planning Perspectives 18(2): 73-78.

Webster, C. and Weeks, G. 1995. "Teenage pregnancy: A summary of prevention program evaluation results." Olympia, WA: Washington State Institute for Public Policy.

Weed, S. E., DeGaston, J., Prigmore, J. and Tanas, R. 1991. "The teen-aid family life education project: Fourth year evaluation report." Salt Lake City, UT: Institute for Research and Evaluation.

Weed, S.E. and Olsen, J.A. 1988. "Evaluation of the sex respect program: Results for the 1987-1988 school year." Salt Lake City, UT: The Institute for Research and Evaluation.

Weikart, D.P. 1989. "Quality preschool programs: A long-term social investment." New York, NY: Ford Foundation.

Wellisch, J., Prendergast, M.L., and Anglin, M.D. 1994. "Drug-abusing women offenders: Results of a national survey." National Institute of Justice: Research in Brief, October.

White, C.P. and White, M.B. 1991. "The Adolescent Family Life Act: Content, findings, and policy recommendations for pregnancy prevention programs." Journal of Clinical Child Psychology 20(1): 58-70.

Whitehead, B.D. 1994. "The failure of sex education." The Atlantic Monthly, October: 55-80.

Wilson, W.J. 1987. The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy. Chicago, IL: University of Chicago Press.

Winter, L. and Breckenmaker, L.C. 1991. "Tailoring family planning services to the special needs of adolescents." Family Planning Perspectives 23(1): 24-30.

Young, M. 1994. "Sexuality education in conservative communities". In J.C. Drolet and K. Clark (Eds.), The Sexuality Education Challenge: Promoting Healthy Sexuality in Young People. Santa Cruz, CA: ETR Associates.

Zabin, L.S. 1994a. "Addressing adolescent sexual behavior and childbearing: Self esteem or social change?" Women's Health Issues 4(2):92-97.

Zabin, L.S. 1994b. "Subsequent risk of childbearing among adolescents with a negative pregnancy test." Family Planning Perspectives 26(5):212-217.

Zabin, L.S. 1993. "Adolescent sexual behavior and childbearing." Developmental Clinical Psychology and Psychiatry, 26: pp. 46-53. Newbury Park, CA: Sage Publications.

Zabin, L.S. 1992. "School-linked reproductive health services: The Johns Hopkins Program." In Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J.L. (Eds.). Preventing Adolescent Pregnancy. Newbury Park, CA: Sage Publications.

Zabin, L.S. and Clark, S.D. 1983. "Institutional factors affecting teenagers' choice and reasons for delay in attending a family planning clinic." Family Planning Perspectives 15: 25-29.

Zabin, L.S. and Clark, S.D. 1981. "Why they delay: A study of teenage family planning clinic patients." Family Planning Perspectives 13: 205-217.

Zabin, L.S., Hirsch, M.B., Smith, E.A., Streett, R., and Hardy, J.B. 1986. "Evaluation of a pregnancy prevention program for urban teenagers." Family Planning Perspectives 18(3): 119-126.

Zabin, L.S., Hirsch, M.B., Streett, R., Emerson, M.R., Smith, M. Hardy, J.B., and King, T.M. 1988a. "The Baltimore pregnancy prevention program for urban teenagers: I. How did it work?" Family Planning Perspectives 20(4): 182-187.

Zabin, L.S., Hirsch, M.B., Streett, R., et. al. 1988b. "What did it cost? Expenditures on student services in a successful pregnancy prevention program." Family Planning Perspectives 20(4): 188-192.

Zellman, G.L. 1982. "Public school programs for adolescent pregnancy and parenthood: An assessment." Family Planning Perspectives 14(1): 15-21.

Zellman, G.L. and Eisen, M. "Teen Talk: Pre-test instruments." Program Archive on Sexuality, Health, & Adolescence, Palo Alto, CA: Sociometrics Corporation.

Zellman, G.L. and Eisen, M. Teen Talk: "Immediate post-test instruments." Program Archive on Sexuality, Health, & Adolescence, Palo Alto, CA: Sociometrics Corporation.

Zellman, G.L. and Eisen, M. "Teen Talk: 12 month follow-up instruments." Program Archive on Sexuality, Health, & Adolescence, Palo Alto, CA: Sociometrics Corporation.

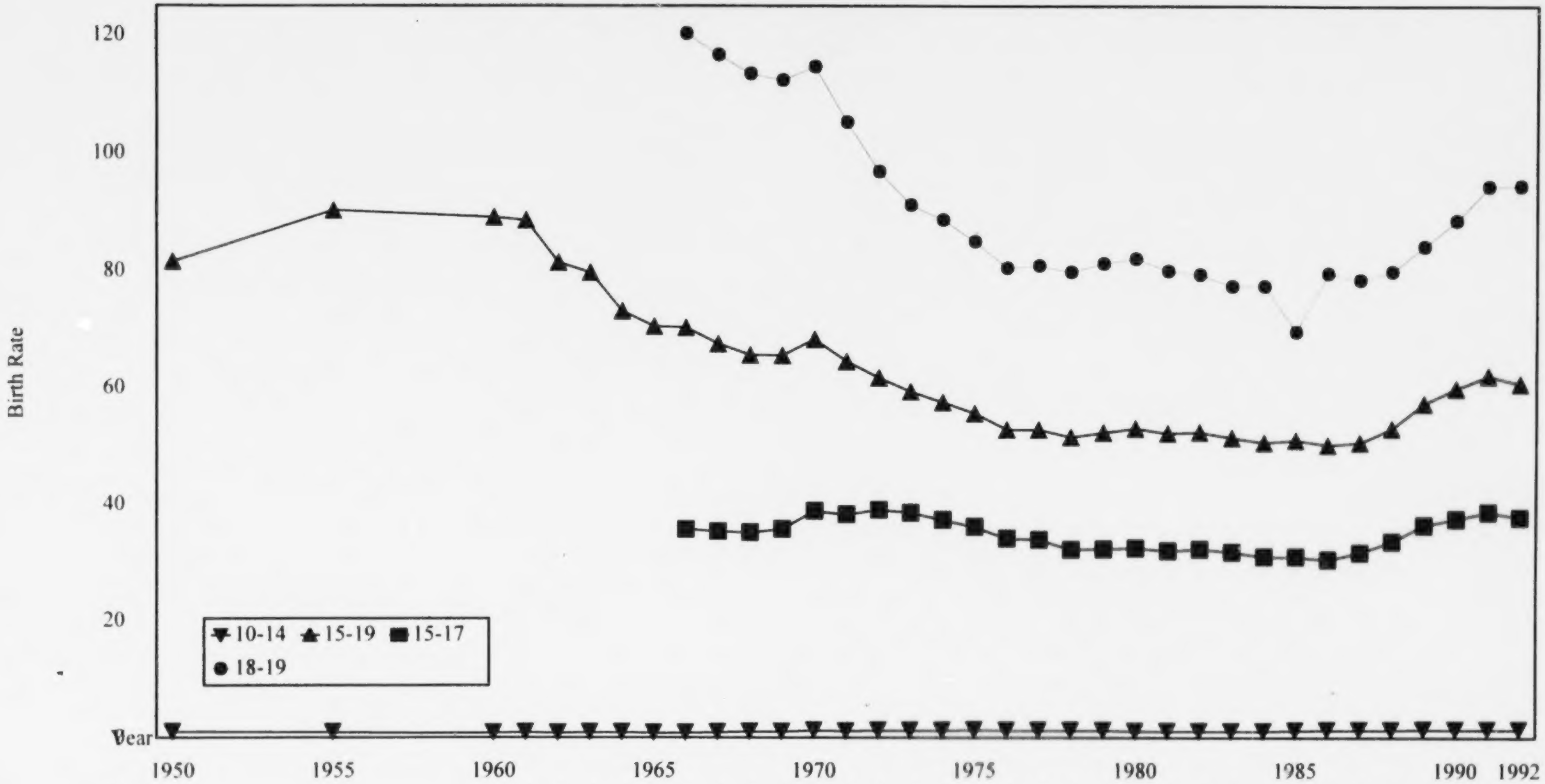
Zellman, G.L. and Eisen, M. 1985. "Teen Talk: Training manual for group discussion leaders." Program Archive on Sexuality, Health, & Adolescence, Palo Alto, CA: Sociometrics Corporation.

______. 1985. "California MCH project improves birth weights and saves money." Family Planning Perspectives 17(4): 185-186.

______. Denver works on paternity establishment: Early results from program improvement grant. Child Support Report.

______. Good decisions about sexuality require more than pat answers. Values & Choices brochure. Minneapolis, MN: Search Institute.

Figure 1
Birth Rates (per 1,000 females) by Age Group, 1950-1992



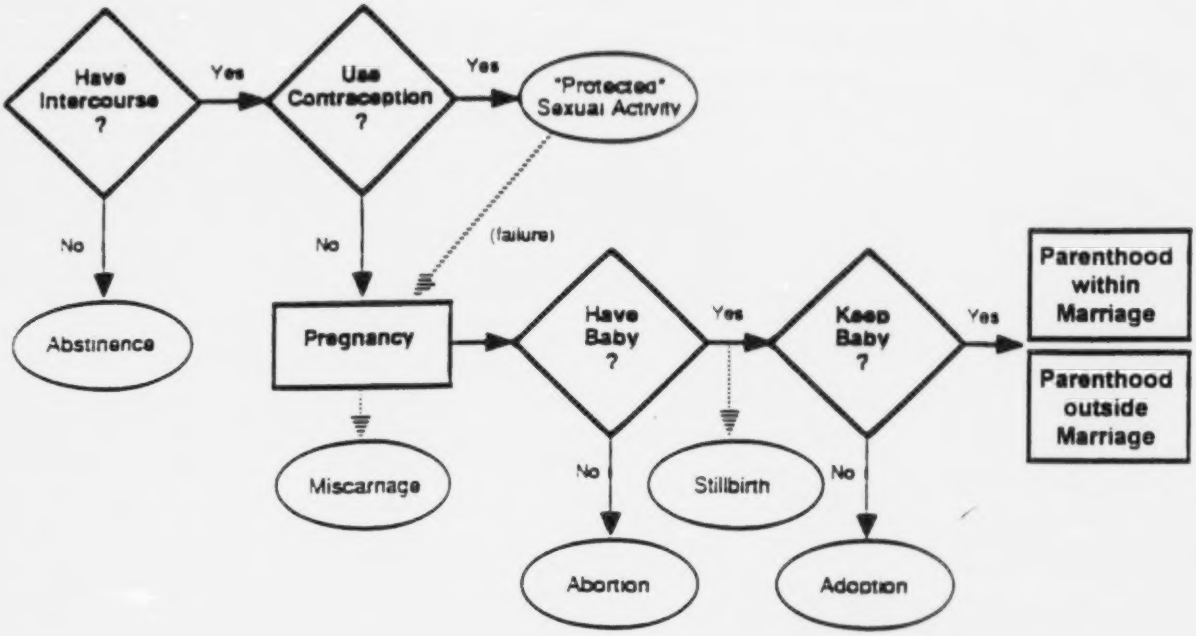
	1950	1955	1960					1965					1970					1975					1980					1985					1990		1992
10-14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15-19	82	90	89	89	81	80	73	71	70	68	66	66	68	65	62	59	58	56	53	53	52	52	53	52	52	51	51	51	50	51	53	57	60	62	61
15-17									36	35	35	36	39	38	39	39	37	36	34	34	32	32	33	32	32	32	31	31	31	32	34	36	38	39	38

Age Group

Note: Birth rates are calculated as the number of births per 1,000 females in the specified age group. Births prior to 1960 were adjusted for underregistration. Data for 1960-1966 and 1968-1971 are based on a 50-percent sample of births. Data for 1967 are based on a 20 - to 50-percent sample of births. Data for 1972 to 1984 are based on 100 percent of births in selected states and on a 50-percent sample of births in all other states. Data are not available for subgroups aged 15-17 and 18-19 prior to 1966.

Source: National Center for Health Statistics. 1994. Monthly Vital Statistics Report: Advance Report of Final Natality Statistics, 1992. 43(5, Supplement), Table 4; National Center for Health Statistics. 1993. Vital Statistics of the United States. 1989. Vol. 1, Natality, Table 1-9, Public Health Service. Washington, DC: Government Printing Office.

Figure 2


Have Intercourse ?
Yes
No
Abstinence
Use Contraception ?
Yes
No
"Protected" Sexual Activity
(failure)
Pregnancy
Miscarriage
Have Baby ?
Yes
No
Stillbirth
Abortion
Keep Baby ?
Yes
No
Adoption
Parenthood within Marriage
Parenthood outside Marriage

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APPENDIX A

Programs/Interventions by Evaluation Approach

Program/Intervention	Experimental Study (Random Assignment of:)			Quasi-Experimental Study[a]	Natural Experiment	Micro-Level Data Analyses	Macro-Level Data Analyses	Other	No Evaluation
	Individuals	Families	Schools						
Adolescent Family Life Care Demonstrations Projects								Varied	
Adolescent Pregnancy Prevention Coalition of North Carolina							X		
Adoption Associates									X
AIDS Prevention Magic Show				X					
Arkansas Family Planning Program							X		
Children's Aid Society's Teen Pregnancy Prevention Program				X					
Cognitive Behavioral Intervention to Reduce African-American Adolescent's Risk to HIV Infection	X								
Cooperative Extension Programs									X
Dollar-a-Day Program									X
Education for Parenting									X
ENABL (Education Now and Babies Later)	X (in progress)								

---

[a] The quasi-experimental category includes a range of approaches of varying levels of methodological rigor. For example, studies which compare the treatment group to a comparison group with similar socio-demographic characteristics fall into this category. A study which bases its evaluation only on a pre and post-test would also fall into this category. Therefore, the classification of quasi-experimental gives no indication of the quality of that evaluation.

Program/Intervention	Experimental Study (Random Assignment of:)			Quasi-Experimental Study[a]	Natural Experiment	Micro-Level Data Analyses	Macro-Level Data Analyses	Other	No Evaluation
	Individuals	Families	Schools						
FACTS & Feelings		X							
Girls, Inc.				X					
Healthy Caring				X					
Home Visitor Program	X (in progress)								
Hull House Teen Pregnancy & Parenting Program				X					
Hyde Amendment					X				
I Have a Future				X					
Man's World Condom Mailing	X								
McMaster Teen Program			X						
Medicaid Abortion Ban/Michigan					X				
New Chance	X								
New Jersey Sex Education Program									X
New Jersey's Family Development Program	X (in progress)								
NIH Programs: Minority Youth Health Behavior								In progress	
Norfolk Adolescent Pregnancy Prevention and Services (NAPPS)				X					

Program/Intervention	Experimental Study (Random Assignment of:)			Quasi-Experimental Study[a]	Natural Experiment	Micro-Level Data Analyses	Macro-Level Data Analyses	Other	No Evaluation
	Individuals	Families	Schools						
Nurse Home Visitation	X								
Octopus Program									X
Ohio's LEAP Program	X								
Parents Too Soon Project				X					
Perry Pre-School				X					
Postponing Sexual Involvement				X					
Preschool/Headstart	X								
Primary Prevention of Adolescent Pregnancy	X								
Project LEAD: High Expectations!				X					
Project Taking Charge				X					
Quantum Opportunities Program	X								
Reducing the Risk				X					
RESPECT				X					
School Based Clinics				X					
School/Community Program for Sexual Risk Reduction Among Teens				X					
Self Center Program				X					
Sex Respect				X					

Program/Intervention	Experimental Study (Random Assignment of:)			Quasi-Experimental Study[a]	Natural Experiment	Micro-Level Data Analyses	Macro-Level Data Analyses	Other	No Evaluation
	Individuals	Families	Schools						
Smart Start				X					
St. Paul Maternal and Infant Care Project				X					
Stay SMART				X					
STEP (Summer Training and Education Program)	X								
Success Express				X					
Swiss STOP-AIDS Campaign								Cross-sectional survey, pre and post	
Teen Choice				X					
Teen Initiative				X					
Teen Outreach Program				X					
Teen STARS (Students Taking Responsibility About Sexuality)				X					
Teen Talk	X (individual or classroom)								
Teen-Aid Family Life Education Project				X					
Teenage Parent Demonstration	X								
Too-Early-Childbearing Programs				X					

Program/Intervention	Experimental Study (Random Assignment of:)			Quasi-Experimental Study[a]	Natural Experiment	Micro-Level Data Analyses	Macro-Level Data Analyses	Other	No Evaluation
	Individuals	Families	Schools						
True Love Waits									X
Untitled/Danielson et al.	X								
Untitled/Earls et al.				X					
Untitled/Forrest and Silverman						X			
Untitled/Green and Sollie				X					
Untitled/Jemmott et al.				X					
Untitled/Kuziel-Perri and Snarey				X					
Untitled/Lancaster--Media Campaigns							X		
Untitled/Moore, Blumenthal et al.							X		
Untitled/Salz et al.	X								
Untitled/Wellish et al.									X
Untitled/Winter and Breckenmaker				X					
Values and Choices				X					
Youth Incentive Entitlement Pilot Project (YIEPP)				X					

Appendix B: Power Analyses

Table B.1 shows a sample power analysis, for a study in which the outcome measure of interest is "Percentage of white females who have experienced premarital sex by age 18." To conduct power analyses, one must obtain a mean, standard deviation, and R-squared for the measure of interest based on previous research. Appendix Table A.1 is based on information reported in Moore, Glei, and Cook (1995). These data are then used in the following formula:

$$\text{MDE} = \frac{3.52\,(\text{SD})\sqrt{(1-R^2)}}{\sqrt{N}}$$

where

MDE = Minimum detectable effect, or the smallest program effect that can be detected statistically at this sample size
SD = standard deviation of the outcome measure
R^2 = R-squared or effect size of the outcome measure
N = Sample size of interest

Appendix Table B.1 uses this formula to illustrate the MDE for the outcome of premarital sex by age 18, for various sample sizes (Ns). MDE is the smallest difference between Es and Cs that can be detected statistically at a given sample size, if the program has such an effect. For example, with 1000 subjects in both the Experimental and Control groups, a group difference of .05 percentage points or larger would be statistically significant. With only 50 subjects in each group, only a difference of .24 percentage points or larger would be significant. Clearly, with smaller samples, one can detect only fairly large program effects. If one expects the program to have relatively small (but meaningful) effects, sample sizes must be large enough to detect these effects.

How can such a table be used to design an evaluation? First, researchers must agree on the effect size they will consider to be meaningful or "policy relevant." Appendix Table B.1 lists a policy relevant effect size of .20 standard deviations. That is, the program will be considered to have made a "policy relevant difference" if the two groups differ by one-fifth of a standard deviation on the outcome of interest. Based on Moore et al. (1995), .20 standard deviations on a measure of premarital sex by age 18 is equal to .10 percentage points (.20 * .50). That is, if the percentage of Es and Cs who have had sex by age 18 differs by .10 percentage points or more, the program will be considered to have had a meaningful effect.

Once the researcher has determined the policy relevant effect, he or she will want to design a study capable of detecting such an effect, should it occur. By examining the MDEs for each sample size shown in Appendix Table B.1, one can see that a sample size of 300 or more in each group provides sufficient power to detect group differences as small as .10 percentage points, should they occur. Sample sizes smaller than 300 in each group will be insufficient to detect meaningful program effects on the percentage of females who have had premarital sex by age 18. In the latter cases, the evaluation would conclude that the program had no effect, when in fact the evaluation was designed from the outset in a way that did not allow the program's effects to be measured reliably.

Interested readers may wish to consult the following text for additional information regarding power analyses: Kramer, H. C., and Thieman, S. (1987). How Many Subjects: Statistical Power Analysis in Research. London: Sage.

Appendix Table B.1
Mimimum Detectable Effects (MDEs) for Various Sample Sizes

Measure	Percentage of White Females who have Experienced Premarital Sex by Age 1
Mean	0.43
SDev	0.50
R-squared	0.09
.20 SD	**0.10**

Sample Size		MDE
Es	Cs	
50	50	0.24
100	100	0.17
250	250	0.11
300	300	0.10
500	500	0.08
1000	1000	0.05
1800	1800	0.04

NOTES. 1. Formula assumes power = .80, alpha = .10, two-tailed tests.
2. Mean, Standard Deviation and R-squared based on Moore et al., 1995.

APPENDIX C

Pregnancy Prevention Programs and Evaluations: Detailed Descriptions

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Name of Program	Adolescent Family Life (AFL) Care Demonstration Projects
Reference/citation	S. D. McLaughlin & T.R. Johnson, *The relationship of client and project characteristics to the relinquishment rates of AFL care demonstration projects,* Seattle: Battelle. July 1992
Sponsor	Since 1982, the AFL program of the Office of Population Affairs has sponsored a number of demonstration projects that provide health, education, and social services for pregnant teens, teen mothers, and their families. By legislative mandate, each project is required to have an adoption counseling component designed to increase the exposure of clients to the adoption alternative.
Description	
Location(s)	29 AFL sites
Time Period of Evaluation	1989
Sample Size and Populations Served	869 clients; pregnant teenage females (race = proportional to pregnant teens overall)
Age/Grade of Target Population	<20 at program contact; however, AFL relatively unlikely to serve clients over age 17 (16 = modal age).
Goals of the Intervention Program	Encourage placement of child for adoption
Approach	Pregnancy counseling programs as mandated component of demonstration projects for pregnant/parenting teens
Evaluation	
Evaluation Strategy	Analysis of variables associated with relinquishment
Methodological Weaknesses	- No formal evaluation; compared national data to clients of AFL programs (not representative sample of adolescent mothers)--these 2 populations are not comparable - AFL programs provided no abortion counseling, so samples are self-selected such that only 1.5% indicate initial intent to abort; no comparison
Has report been peer-reviewed?	No
Method Used	Odds ratios; logit models

Results Process Evaluations Associations Impacts	- Relinquishment rate = 11.6% compared to best estimate of 2% nationally, but 2 populations not comparable - Relinquishment associated with more education, more educated mothers, 2-parent households; and not receiving public assistance -- that is, among girls whose "costs" of parenting are higher - Which adoption counseling approach was used did make a difference, even after controls were accounted for. - Counseling approach differences more important among non-whites (group least likely to relinquish) and among those initially intending to parent. - One-half of those initially intending to relinquish decided to parent
Special notes, comments	Not included are those pregnant teens who initially choose abortion as an option, as they don't go to these programs, according to study.

Name of Program	Adolescent Pregnancy Prevention Coalition of North Carolina (APPCNC)
Reference/citation	Huberman, B. 1995. Presentation at "Welfare reform in the 104th Congress: Goals, Options and Tradeoffs" Forum, cosponsored by the Institute for Research on Poverty and the Family Impact Seminar, Washington, D.C.
Sponsor	United Way, North Carolina Legislature, The Blumenthal Foundation, The Knight Foundation, March of Dimes, Greater Piedmont Chapter, Mary Reynolds Babcock Foundation, N.C. Rural Economic Development Center.
Description	
Location(s)	North Carolina
Time Period of Evaluation	1970-1993
Sample Size and Populations Served	Not given (statewide population of girls 10-19)
Age/Grade of Target Population	Girls aged 10-19
Goals of the Intervention Program	APPCNC is a statewide non-profit that "serves as advocate, catalyst, and coordinator of all efforts to prevent both primary and secondary adolescent pregnancies in North Carolina. To educate and inform North Carolina citizens, organizations, agencies, churches, and policy makers of the need for prevention; provide resources, research, data, and materials to promote prevention; establish local community-based prevention councils in all 100 counties; train professionals and volunteers to be effective prevention advocates and providers; advocate for policies and grant programs to prevent adolescent pregnancy in NC".
Approach	Creates a public-private partnership which assists individuals, groups, and communities to organize and implement adolescent pregnancy prevention programs. The Coalition provides local, regional and statewide educational conferences, training, and resource materials for professionals and volunteers, coordinates statewide advocacy and public policy development and conducts research and data analysis to facilitate prevention strategies.
Evaluation	
Evaluation Strategy	Analysis of statewide pregnancy, abortion and birth rates
Methodological Weaknesses	Weak evaluation in that causality cannot be confirmed. There is no way to know if changes in statewide fertility rates are associated with the coalition, with individual interventions, or with other unrelated factors.
Has report been peer-reviewed?	No

Method Used	Calculation of birth, pregnancy and abortion rates
Results Process Evaluations Associations Impacts	- 1993 pregnancy rate for 15-19 year olds dropped below 1978 rate, continuing significant downward trend since 1990 - 1993 abortion rate for 15-19 year olds is lower than 1978, continuing downward trend since 1988 - 1993 birth rate for 15-19 year olds continues downward trend since 1990
Special notes, comments	

Name of Program	Adoption Associates
Reference(s)/ Citation(s)	Donovan, P. (1992). "Abortion agency offers adoption services". *Family Planning Perspectives, 24*(5), 224-225.
Sponsorship	Reproductive Health Services, an abortion provider in Missouri
Description	
Location(s)	St. Louis, Missouri
Time Period of Evaluation	No evaluation
Sample Size and Populations Served	300 to 400 women go through Adoption Associates (AA) a year; about 25-30 have put child up for adoption per year since the agency's start in the summer of 1989
Age/Grade of Target Population	All ages can go to agency; age break out has been approximately half 18-20, one-third 21-25, "a handful" less than 18
Goals of the Intervention Program	Reproductive Health Services (RHS), the largest abortion provider in Missouri, was concerned that clients considering adoption were lost through their referral process. They felt that if the clients were referred to adoption services in same building, they'd be more likely to go. RHS established AA and now contributes about $50,000/yr to their support, as well as not charging for rent or other overhead. RHS and AA share facilities but have separate entrance.
Approach	All RHS clients have private options counseling for resolution of unplanned pregnancy. If women think they want adoption, they are referred to AA. AA's focus is the pregnant woman, not the adoptive family. They have counseling, help mothers get Medicaid, help with legal aspects of adoption, etc. and pay for prenatal costs if birth mother does put child up for adoption.
Evaluation	
Evaluation Strategy	No evaluation
Analytic Strategy/ Statistical Methods	n/a
Methodological Weaknesses	n/a

Has report been peer-reviewed?	Yes
Results	n/a
Special Comments/Notes	Not an evaluation; only a brief description of an intervention directed not at pregnancy prevention, but an alternative resolution of pregnancy.

Name of Program	AIDS Prevention Magic Show
Reference/citation	Lustig, S.L. 1994. "The AIDS prevention magic show: Avoiding the tragic with magic". Public Health Reports, 109:162-167, U.S. Department of Health and Human Services.
Time Period of Evaluation	Not reported
Description	
Sponsor	Not reported
Location(s)	Inner-city Chicago
Sample Size and Populations Served	Pilot study population was a "convenience sample" of 266 boys and girls in 7 inner city Chicago after-school programs (participants self-selecting). Still in its pilot phase, the show has been seen by 281 students.
Age/Grade of Target Population	Aged 10 to 15
Goals of the Intervention	- Provide information to teens about AIDS in an entertaining way - Dispel misconceptions about transmission - Practice refusing sex - Teach skills to practice safer sex - Increase perceived self-efficacy to perform preventative behaviors successfully
Approach	- 30 minute magic show, presented by Cyrus (or Iris) the Virus, a sinister but entertaining character portrayed by any health educator willing to spend a few hours learning the magic tricks. The tricks explain why sharing needles and choosing sexual partners based on appearance alone can result in AIDS.
Method	Mean scores and T-tests
Evaluation	
Evaluation Strategy	- 10 minute pretest includes 5 questions pertaining to AIDS knowledge and 8 questions pertaining to self-efficacy. - Post test

Methodological Weaknesses	- Self selection bias in sample - Could be that show caused students to report better self-efficacy because it is expected. - Short term evaluation--does this change hold after 1 month? 6 months? a year? - Don't know if their is any resulting change in actual behavior. - No comparison group
Has report been peer-reviewed?	No
Results Process Evaluations Associations Impacts	- Post test knowledge score significantly higher - Perceived self-efficacy is significantly improved in 2 of the four categories (refusing sex and putting on condoms). - No difference in self-efficacy regarding the purchase of condoms. May reflect a lack of money to do so. - No change in self-efficacy regarding taking off condoms. A new awareness of proper condom removal may make students feel less confident about a procedure they took for granted. More practice may be necessary.
Special notes, comments	- Cost of magic show: $112 - Lustig is a student at Rush Medical College in Chicago, IL. His proposal tied for 3rd place in the 1992 Secretary's Award for Innovations in Health Promotion and Disease Prevention. It has been edited and revised for publication.

Name of Program	Arkansas Family Planning Program
Reference/citation	Arkansas Department of Health, Division of Reproductive Health, Family Planning Program, Progress Report of Program Year 1993/1994, Narrative.
Sponsor	Arkansas Department of Health
Description	
Location(s)	Arkansas
Time Period of Evaluation	1990 to 1997 (still on going)
Sample Size/Population	Using state statistics from Arkansas Center for Health Statistics, Healthy Arkansans 2000.
Age/Grade	Not specified
Goals of the Program	Make every pregnancy a planned pregnancy
Approach	- New clients counseled on all methods of contraception and the effectiveness of each method; abortion is not considered a method of contraception and therefore is not discussed. - Post examination counseling provided and additional counseling and education provided as needed. - Comprehensive family planning services available to all Arkansas residents at 108 sites statewide. - No longer have time-dedicated sexuality educators: tried to ensure that sexuality education requests from schools and communities are filled. - Staff training: Offering HIV Counselor training, Women's Health Care Update, Arkansas Health Education Conference, Health Education In-services, Nurse Practitioner In-service, AIDS 101, Women and AIDS, Babies and You, True Colors. - School Based Health Services: 24 schools offer various health services. - WRECAPP--Watersheds' Responsibility Combating Adolescent Pregnancy Program: Abstinence based, Highland Park, Granite Mountain, and Hollingsworth Court communities in Little Rock. In 1991 expanded to include 6 and 7 year olds. Teen and community leaders as role models/mentors; college students volunteered as tutors of basic skills and to help reinforce abstinence as a positive lifestyle for adolescents; guest speakers include attorneys, businessmen, former professional athletes, teen fathers. - Male Responsibility Program (Phillips County): Male's Place Clinic includes topics such as male responsibility and contraceptive methods for males and females. Clinic participants are encouraged to bring girlfriends.
Method	State level descriptive statistics

Evaluation	
Evaluation Strategy	Over time comparison of state level statistics
Methodological Weaknesses	- No way to connect state wide trends to specific policies or programs; cannot confirm causality - No way to know if changes are due to factors other than policies and programs
Peer-reviewed?	No
Results Process Evaluations Associations Impacts	- Crude birth rate: Baseline (1990) 15.5; 14.5 in 1991; 14.5 in 1992. - Pregnancy rate among 15-19 year olds: 77.1 in 1990; 79.9 in 1991. - 2nd births to mothers 17 and younger: 15.1% in 1990; 15.3% in 1991. - % sexually active by age 15: 48.7% in 1990; 41.9% in 1993. - % sexually active by age 17: 69% in 1990; 66.4% in 1993.
Special notes, comments	

Name of Program	Children's Aid Society's Teen Pregnancy Primary Prevention Program
Reference/citation	Carrera and Dempsey. 1994. Carrera/Dempsey replication programs: 1993-94 summary of client characteristics and outcomes. Philliber Research Associates.
Time Period of Evaluation	1993-1994
Sponsor	Robin Hood Foundation
Description	
Location(s)	6 replication sites throughout New York City
Sample Size and Populations Served	219 adolescents enrolled (75% retention rate, i.e. 163 youth active presently). 54% have been participants for at least 2 years. High risk sample (one-third live in 2 parent homes, low parental education).
Age/Grade of Target Population	Ages 10-20
Goals of the Intervention	Prevention of pregnancy; promotion of school progress
Approach	Same as earlier version (see review of Carrera and Dempsey, 1988, reviewed next)
Method	Bivariate tabulations
Evaluation	
Evaluation Strategy	Pre-test, post-test; comparison of descriptive characteristics of youth in programs with national data.
Methodological Weaknesses	- No comparison group; can't tell how much of the difference is attributable to program - Lacks rigorous evaluation, mainly just descriptive comparison; no control for factors that are specific to this sample
Peer-reviewed?	No
Results Process Evaluations Associations Impacts	- Rates of sexual activity (ever had sex) is lower for females 15-17 and 15-19 than national averages; males are same as national average. Rates for youth 11-15 are lower than Boston inner city sample for both sexes. - Condom use at last intercourse is higher for participants than national average. - % of females who have ever had a pregnancy is lower than pregnancy rate for New York City and U.S. - % having a birth is significantly lower than national average even for whites.

Special notes, comments	- Can't really know how much of the difference to attribute to the program and how much to attribute to specific characteristics of the sample or other environmental factors. - Replication of earlier program (see Carrera and Dempsey, 1988, reviewed next)

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Name of Program	Children's Aid Society's Teen Pregnancy Primary Prevention Program
Reference/citation	Carrera, M.A. and Dempsey, P. (1988). Restructuring public policy priorities on teen pregnancy: A holistic approach to teen development and teen services.
Time Period of Evaluation	No formal evaluation
Sponsor	Children's Aid Society
Description	
Location(s)	Western, central, and east Harlem areas of New York
Sample Size	175 young people (90 males and 85 females) and 75 parents are participating 36 months after start (Feb. 1985).
Age/Grade of Target Population	Junior and Senior High school students, ages 10-18
Goals of the Intervention	Produce in young people a desire to avoid unintended pregnancy and the ability to make responsible sexual decisions.
Approach	- Address equally males and females - Family life and sex education program is a formal 15-week, 2 hours per/wk educational experience for teens and parents - Medical and health services provided 4 hours each week. Each teen has a complete physical; when necessary physicians provide contraception counseling and prescriptions. Each teen--male or female--using a contraceptive has a weekly meeting with a counselor to make sure it is being used regularly and correctly. - Mental health and counseling services are offered 3 days a week. - Self esteem enhanced through the performing arts: weekly 2 hour workshops, parents and teens explore issues through music, dance, role-play, and dramatization ranging from conflict resolution to job interviewing. - Learn skills in lifetime sports such as tennis, golf and swimming that require precise mastery, self discipline and self-control. - Academic assessment, tutoring, homework help program (2 afternoons a week). - Job club and career awareness program: Weekly 2 hour program to explore career possibilities. Each teen must secure a part or full time summer job, or if 12-13 yrs old, participate in the Entrepreneurial Apprenticeship Program. Those in employment program open bank account. - Guaranteed acceptance at Hunter College, provided they complete H.S., participate in the pregnancy prevention program, and get recommendation of the teen pregnancy project director. Major costs paid thru financial aid & Children's Aid Society's special fund.
Method	Descriptive statistics

Evaluation	
Evaluation Strategy	No formal evaluation
Methodological Weaknesses	There is no evaluation as yet, though one is planned
Has report been peer-reviewed?	No
Results Process Evaluations Associations Impacts	- 2 females have become pregnant and 1 male has caused a pregnancy (could be under reporting) - All are attending school and 75% are at grade level. - No reported drug or alcohol abuse - 100 teens worked summer jobs previous summer; 49 are working part time after school - 89 teens have bank accounts - 4 teens and 4 parents have begun course work at Hunter College.

Name of Program	Cognitive Behavioral Intervention to Reduce African-American Adolescents' Risk for HIV Infection
Reference/citation	St. Lawrence, Brasfield, Jefferson, Alleyne, O'Bannon, and Shirley (1994). Cognitive-behavioral intervention to reduce African-American adolescents' risk for HIV infection. Unpublished manuscript.
Sponsor	Jackson State University and Jackson-Hinds Comprehensive Health Center
Description	
Location(s)	Jackson, MS: Population approx. 400,000
Time Period of Evaluation	Not in information we have available
Sample Size and Populations Served	246 African-American Youth who visited health center serving predominantly low income, minority patients. Voluntary selection, were paid $5 an hour for participation. Had to have parent's consent and no current symptoms of HIV/AIDS.
Age/Grade of Target Population	Age 14-18
Goals of the Intervention Program	To reduce African American adolescents' risk for HIV infection.
Approach	Two groups: - Education (EC--controls): One 2 hour session of standard curriculum and HIV/AIDS education - Behavioral skills training (BST): Eight 90-120 minute weekly group meetings including AIDS education, sexual decisions and values, technical competency skills, social competency skills, cognitive competency skills, and social support/empowerment
Method	Bivariate analyses by gender and group
Evaluation	
Evaluation Strategy	- Evaluated at baseline, randomly assigned to education program (EC), or education and skills training (BST) - Self administered risk behavior survey, condom attitudes scale, AIDS risk knowledge test, and self efficacy. - Pre and post test comparisons with 1 year follow-up
Methodological Weaknesses	- Controls were much higher on risky behavior to begin with - Don't follow for very long--Does it make a difference 3 or 4 years down the road?

Has report been peer-reviewed?	No
Results Process Evaluations Associations Impacts	- BST Males had lower rates of unprotected vaginal, oral, and anal intercourse than EC males and maintained that difference at 1 year follow-up. - EC females increased frequency of unprotected intercourse, while BST females maintained stable lower levels of unprotected vaginal intercourse and discontinued unprotected anal intercourse. - Both BST sexes show significant increase in condom use, but males gradually decreased use by 1 yr follow-up so that EC and BST were similar. - BST became more skillful at handling coercive situations and providing information to peers.
Special notes, comments	Only have results section of the paper

Name of Program	Cooperative Extension Programs
Reference/citation	Harriman, Wilson, and Hale (1989). Cooperative extension programs in teen parenting and pregnancy prevention. Journal of Home Economics, 81:25-39.
Time Period of Evaluation	1987
Sponsor	Hewlett Foundation, American Home Economics Association Population Education Committee
Description	
Location(s)	39 states
Sample Size and Populations Served	N/A
Age/Grade of Target Population	Pre-teens and teens (depends on specific program)
Goals of the Intervention	Determine the type and extent of population/family planning content included in cooperative extension programs, ascertain the most common delivery methods used, and identify target audiences of these programs
Approach	Depends on specific program
Method	Tabulations
Evaluation	
Evaluation Strategy	- Identified programs through data base searches, letters to all assistant directors of cooperative extension home economic programs, e-mail follow-up and call for information to state 4-H assistant directors. Also put an advertisement in The Reporter, the national publication of the National Association of Extension Home Economists.
Methodological Weaknesses	N/A
Has report been peer-reviewed?	??

Results Process Evaluations Associations Impacts	- Identified 80 programs in 39 states that were aimed at preventing teen pregnancy or teaching parenting skills and infant development. - 30% targeted pregnant & parenting teens; 27% targeted other teens and 28% targeted parents and youth and; 1[illegible]% at pre-teens. - Pregnancy prevention programs commonly taught: pregnancy, parenting skills, birth control, sex education, self-esteem, and decision-making. - Series of weekly lessons appears to be the most frequently used method of delivery. Longer one time workshops were also common. - Often networked with other community agencies and organizations.
Special notes, comments	

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Name of Program	Dollar-a-Day Teenage Pregnancy Prevention Program
Reference(s)/ Citation(s)	Planned Parenthood of the Rocky Mountains. Dollar-A-Day Program descriptive materials. Denver, CO: Author. (Information available from Krista Anderson, Community Outreach Coordinator, (303) 832-5991)
Sponsorship	Not stated
Description	
Location(s)	Planned Parenthood of the Rocky Mountains (Denver, Colorado)
Time Period Evaluation	1985-1993
Sample Size/Pop. Served	Information not given
Age/Grade	Information not given
Goals	To postpone early childbearing; to prevent second and first teen pregnancies
Approach	In 1985, developed for girls who had a pregnancy before age of 15. In 1990, expanded to prevent first pregnancies among "high risk" girls (defined as girls who were sexually active, or girls with a close relative who became pregnant before 15). Small groups of girls meet once/wk at neighborhood health centers, community centers or high school; they receive $7/week as long as they are not pregnant. They can continue in group until high school graduation unless they become pregnant. The support group promotes camaraderie, commitment and self-esteem, offering constructive ideas and role models, and "broadening the girls' visions of their own futures, their potential, and the options available to them". Groups are led by trained peers.
Evaluation	
Evaluation Strategy	None really; they report success rates by dividing the number pregnant by the number who have graduated the program, and subtracting from 1. That is, 83 girls have graduated (since 1985), 25 have become pregnant; 25/83=30%, so they say 70% success rate.
Analytic Strategy	None other than calculation of success rate

Methodological Weaknesses	- Success rate may have been calculated incorrectly. If by their definition, the number of graduates is the number who complete the program without becoming pregnant, then the success rate should be: 1-[# pregnant/(# preg + # graduate)]. - Weak evaluation; no measures of length of time in program, no controls for other factors. It is unknown how "good" a success rate of 70% actually is, with nothing to compare it to. - Also unclear as to what aspect of program is preventing pregnancy. Was it the monetary incentive, or was it the support group and self-esteem boosting?
Has report been peer-reviewed?	No
Results	Claim a 70% success rate
Special Comments/Notes	

Name of Program	Education for Parenting
Reference/citation	Scattergood. (1990). A taste of parenthood. American School Board Journal, 177(10):24-25.
Sponsorship	Not stated
Time Period of Evaluation	No evaluation
Description	
Location(s)	Philadelphia
Sample Size/Population served	N/A
Age/Grade of Target Population	Grades K-3, and more advanced curriculum for grades 4 through 8
Goals of the Intervention	Prevent teen pregnancy by exposing elementary school students to the demands of child care
Approach	- Academic study covers child care costs, infant growth, and the time demands of parenthood. - Monthly classroom visits by a parent and infant. On a typical visit, the parent--usually the mother--and infant sit on a rug in the center of the classroom, surrounded by students who observe the baby's behavior and ask the mother questions. - Student exercises include interviewing parents about their experiences and caring for classroom pets.
Evaluation	
Evaluation Strategy	N/A
Method	N/A
Methodological Weaknesses	No evaluation
Peer reviewed?	??
Results	N/A
Special notes, comments	- One third grader wrote in a class exercise, "I have learned that the more babies you have, the harder it is to raise them because they give you a pain in the neck. I didn't know it was such a responsibility." - Cost averages $1,919 a class or $64 per child.

Name of Program	ENABL (Education Now and Babies Later)
Reference/citation	Materials from California Office of Family Planning, Department of Health Services (DHS)
Sponsor	California Office of Family Planning, DHS
Description	
Location(s)	28 projects across 30 counties in California
Time Period of Evaluation	1992-(evaluation in process)
Sample Size and Populations Served	Not specified
Age/Grade of Target Population	Youth ages 12-14
Goals of the Intervention Program	Postpone sexual involvement
Approach	- Direct education curriculum--Postponing Sexual Involvement (PSI); 5 sessions 45-60 minutes long - Mass media support - Parental and community involvement
Evaluation	
Evaluation Strategy	- Randomly assigned youth to treatment and control groups (3 forms: Basic ENABL, Enhanced ENABL A (PSI for parents, 1-2 90 minute session), Enhanced ENABL B (teen leaders) - Questionnaire data collected 1) prior to implementation 2) 2-3 mos. after completion of PSI 3) 18 months after the pretest. - Four designs: 1) Effects of adult vs. peer taught PSI; 2) Effect of PSI in community agencies; 3) School and community-wide activities on teens' knowledge, attitudes, and behavior; 4) 7th vs. 8th grade (look at subgroup differences).
Methodological Weaknesses	No evaluation of long term impacts--what about impact in 3 or 4 years?
Peer-reviewed?	No
Results	- Evaluation results will be presented in Fall 1995 in San Diego at the American Public Health Association meetings.
Special notes, comments	

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Name of Program	FACTS & *feelings*
Reference(s)/ Citation(s)	Miller, B.C., Norton, M.C., Jenson, G.O., Lee, T.R., Christopherson, C. & King, P.K. (1993). Impact Evaluation of FACTS & *feelings*: A Home-Based Video Sex Education Curriculum. *Family Relations*, 42, 392-400.
Sponsorship	Office of Adolescent Pregnancy Programs, DHHS
Description	
Location(s)	Northern Utah
Time Period of Evaluation	Not stated what years study started/completed; two post-tests were completed, one at three months after pre-test/baseline, and one at 12 months after baseline.
Sample Size and Populations Served	6000 families were sent letter being asked to participate (drawn from 2 semi-rural counties and 2 urban school districts); 548 families volunteered to participate
Age/Grade of Target Population	12 to 14 (7th and 8th grades)
Goals of the Intervention Program	1) to produce video and print resources to help parents and adolescents talk about sexual issues at home; 2) to facilitate and encourage discussion between parents and children about sexuality issues; 3) to test effect of these resources on various outcomes, including quantity and quality of parent-child communication about sexuality issues, and 4) to decrease likelihood of early adolescent sexual involvement
Approach	- Main focus is sexual abstinence; also stresses parent-child communication, self-respect, respect for others, gender equality, decision making skills, assertiveness/refusal skills. All of these skills and values are given only in relation to abstinence - Curriculum has 6 units, each consisting of a 15-20 minute video, mailed to the home with accompanying discussion materials
Evaluation	
Evaluation Strategy	- Families were randomly assigned to one of three study groups: Families receiving videotapes and mailed newsletters (explaining the materials) (N=126); families receiving videotapes only (N=132) and families receiving neither (control, N=290). - Randomized experimental design with pretest, posttest (3 months after baseline/intervention), and delayed posttest (12 months after baseline)

Analytic Strategy/ Statistical Methods	They constructed scales of outcomes such as sexual behavior, likelihood of sex before marriage, likelihood of sex in the next year, and abstinent sexual values. They used principal components with varimax rotation to define scales, and reliability analysis (alphas) to refine scales. To analyze changes in outcome measures over time, they used univariate repeated measures analyses of variance on the three study groups at three time periods. The model tests for (or controls for) a main effect of group averaging across the 3 time periods, a main effect of time (which measures change across time, irrespective of intervention), and the effect of the interaction between group and time. The most important hypothesized or hoped for interaction effect would be the effect of group by time on sexual behavior; that is, they would like to have seen treatment group teens having lower sexual behavior scores over time compared to the control group.
Methodological Weaknesses	- The sample selected was extremely homogeneous (due to being in Utah and being Mormon the mothers and fathers were, respectively, 93 and 97% white, 85 and 88% Mormon); due to this selective sample, only 5% of teens had reported sexual intercourse at time of delayed posttest. With so little variation in this (as well as other) outcomes, it is difficult to see effects of intervention, or to see differences between the two treatment groups. Even when the authors were examining value changes (in teens or parents), which are easier to change than behavior, the low variability among values was still a statistical problem in that their highly abstinent values at baseline left very little room for treatment change. - Results are not generalizable due to the selective Utah sample; we don't know if this curriculum would be effective on a different type of population.
Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	**Process**: The authors do not report any formal process evaluation, however, the authors did demonstrate that a home-based video program can be implemented to facilitate parent-teen communication. - The parent-teen communication outcomes can be seen as a process measure, i.e., if the findings show increased parent-teen communication on sexuality over time for the treatment group, then the authors have showed that the home-based program does work to facilitate discussion about issues between parents and teens (regardless of whether it leads to later sexual onset or changes in sexual behavior of teens). - The authors did find increased parent-teen communication for treatment groups at the 3-month posttest, but all 3 groups returned to their pretest level of communication at the 12-month posttest. (This finding suggested to authors that intervention needs to be designed to sustain this initial increase in communication observed.) **Impact**: The key outcomes of sexual behavior, intentions (teen plans to have sex before marriage, plans to have sex in next year), and values were not significantly affected by the treatment (noting caveats and weaknesses of these findings)
Special Comments/Notes	The authors plan to follow-up these children again after a longer period of time, to give more children time to potentially make the transition to sexual intercourse.

Name of Program	Girls, Inc. (formerly Girls Clubs of America) Preventing Adolescent Pregnancy Program
Reference/citation	H. J. Nicholson and L.T. Postrado, "A Comprehensive Age-Phased Approach: Girls Incorporated," pp. 110-138 in Miller, Card, et. al (1992). L.T. Postrado and H.J. Nicholson, "Effectiveness in Delaying the Initiation of Sexual Intercourse of Girls Aged 12-14: Two Components of the Girls Incorporated Preventing Adolescent Pregnancy Program," *Youth and Society 23*, March 1992, 356-379.
Sponsor	Carnegie Corporation, William T. Grant Foundation, William and Flora Hewlett Foundation, Henry J. Kaiser Family Foundation, David and Lucile Packard Foundation, the Prudential Foundation, and the DeWitt Wallace-Reader's Digest Fund, Inc.
Description	
Location(s)	4 sites: all with adolescent pregnancy rate higher than the national average
Time Period of Evaluation	1985-1988 [annual survey administered in Oct. 85, 86, & 87 and at end of last program year, Oct. 88; *Youth and Society* article used before & after for 1 year from each subject; chapter looked at 2-year time period]
Sample Size and Populations Served	-412 girls with no prior sexual experience -Will Power/Won't Power (WP/WP): N = 257 participants, 155 comparison subjects; Growing Together (GT): N = 84 participants, 328 comparisons; 117 chose neither program, and 46 chose both programs -about 75% black, 11% Hispanic from high areas of adolescent parenting
Age/Grade of Target Population	Females 12-15
Goals of the Intervention Program	- Delay initiation of sexual intercourse - Pregnancy prevention
Approach	- Comprehensive: motivation, skills, family communication - 4 components: 1) WP/WP: delaying early sexual involvement for younger teens 12-14, 6 2-hr. sessions; 2) GT: parent/daughter workshops on sexual information and behavior, 5 2-hr. sessions; 3) Taking Care of Business: included goals and career planning plus contraception, abstinence, sexual responsibility; 4) Health Bridge: delivery system of reproductive health services
Evaluation	
Evaluation Strategy	- Compared program participants with nonparticipants--all recruited by Girls Inc.--participation voluntary - Originally designed as 4 participation sites; 4 comparisons (comparison sites too demographically different; evaluators discarded 4 comparison sites and instead compared volunteers and nonvolunteers at 4 participation sites)

Methodological Weaknesses	- Not probability sample: self selection into program; Growing Together (GT) participants were younger, more often white, more often Catholic, fewer friends/relatives with teenage pregnancy. No such problem found for Will Power (WP) sample. - Girls able to select whether to participate in 0,1,2,3,or 4 programs--also self selection regarding session attendance. - Some positive results can be attributed to being younger. - Meaning of significance tests is not clear.
Has report been peer-reviewed?	Yes (in Miller, Card, et. al, 1992)
Method Used	Chi-square, logistic regression, odds ratios (bi-variate, then multi-variate comparisons) Chapter compared effectiveness of 4 components; both evaluations compared participants/nonparticipants and partial participants.
Results Process Evaluations Associations Impacts	- WP/WP participation did not affect sexual initiation; however, higher participation levels associated with less initiation--but a U-shaped curve with some participation leading to more initiation than none. - GT also produced mixed findings. GT appeared associated with delay of sexual activity, but not statistically significant. With this program also, girls with less than total participation had higher sexual initiation rates than non-participating girls (but not significant). - The fact that less than total participation is associated with worse outcomes is troubling. The WP/WP girls were examined for demographic & social differences among participation types--the in-betweens were less white but had better grades and lower welfare and more 2-parent families. - Chapter (combining 4 program elements): Sexual intercourse without contraception -- again partial participation worse than none. Total better than partial and better than none. Pregnancy--a rarer outcome--not significant but always in right direction. Greater effect on pregnancy achieved by being 13 or younger and not having a pregnant girlfriend. No single component provided pregnancy immunity.
Evaluator Affiliations	Both evaluators with Girls Incorporated Frank Furstenberg, Doug Kirby, Joy Dryfoos on advisory panel
Special notes, comments	Difficult to recruit parents, so went to ages 9-11 for Growing Together. Enthusiasm appears intact, despite findings which aren't totally encouraging. Weak evaluation.

Name of Program	Girls, Inc.
Reference/citation	Girls, Inc. (1991). Truth, Trust, and Technology: New research on preventing adolescent pregnancy. New York.
Time Period of Evaluation	October 1985 to October 1988
Sponsor	Carnegie Corporation, William T. Grant Foundation, William and Flora Hewlett Foundation, Henry J. Kaiser Family Foundation, David and Lucile Packard Foundation, the Prudential Foundation, and the DeWitt Wallace-Reader's Digest Fund, Inc.
Description	
Location(s)	Not stated
Sample Size and Populations Served	750 girls. Tested for self selection bias by comparing demographic characteristics and concluded that the only components with a possible bias was Growing Together. For Will Power and Taking Care of Business found that non participants were possibly at less risk of teen pregnancy than participants. Comparisons of project subjects who enrolled in no program components, in one program component, and 2 or more found no significant differences.
Age/Grade of Target Population	Aged 12-17
Goals of the Intervention	See below
Approach	- Growing Together: series of parent-daughter workshops for younger teens designed to increase positive communication about sexual information and values - Will Power/Won't Power: Assertiveness training program for younger teens designed to help them say and mean "No" while remaining popular. - Taking Care of Business: designed to increase older teen's motivation and skills to avoid pregnancy through educational and career planning, goal setting, communication skills, and responsible decision making about sexual behavior and contraception - Health Bridge: Delivery system that links education at Girls Inc. centers with community based health services.
Method	Descriptive statistics by group

Evaluation	
Evaluation Strategy	Experimental group were those girls who chose to enroll in program components. Program participants who did not enroll in any of the program components served as the comparison group. Completed a survey each program year and at the end of the program. Analysis of data was based on those women who completed at least 2 consecutive annual surveys.
Methodological Weaknesses	- Treatment of selectivity is not satisfactory, they attribute to "dosage" what may be due to selection. - Comparing program participants to non participants is problematic due to selection bias. - No controls for any demographic characteristics such as age or race. - They don't provide attrition rates
Has report been peer-reviewed?	No
Results Process Evaluations Associations Impacts	- Growing Together participants were less than half as likely as non participants to have sexual intercourse for the first time (by what age? selectivity?) - Girls who participated in nearly the entire program of Will Power/Won't Power were the least likely to have sexual intercourse (half as likely as nonparticipants and less than 1/3 as likely as girls who participated for a shorter time) - Young women in Taking Care of Business who participated in nearly the entire program were half as likely as nonparticipants to have sex without birth control. - Young women who participated in Health Bridge reported having sex without birth control 1/3 as often as nonparticipants and were less than half as likely to become pregnant.
Special notes, comments	Weak evaluation

Name of Program	Healthy Caring
Reference/citation	E.E. Kisker, R.S. Brown, J. Hill, *Healthy Caring: Outcomes of the Robert Wood Johnson Foundation's School-Based Adolescent Health Care Program.* Mathematica Policy Research, Inc. August 1994. E.E. Kisker, E.L. Marks, W.A. Morrill and R.S. Brown. *Healthy Caring: An Evaluation Summary of the Robert Wood Johnson Foundation's School-Based Adolescent Health Care Program* August 1994. Presentation at Alpha Center Evaluation Meeting. E.L. Marks and C.H. Marzke, *Healthy Caring: A Process Evaluation of the Robert Wood Johnson Foundation's School-Based Adolescent Health Care Program* Princeton, NJ: Mathtech, Inc. 1993.
Sponsor	Robert Wood Johnson Foundation; centers sponsored by public health departments, hospitals, etc. at local level
Description	
Location(s)	24 junior and senior high schools in the U.S.
Time Period of Evaluation	Spring 1989 (9th or 10th) to Spring 1991 and Spring 1992 (senior year)
Sample Size and Populations Served	3,050 students (859 urban national comparison students) Cities with populations of 100,000 +
Age/Grade of Target Population	High school 9th or 10th grades through senior year
Goals of the Intervention Program	- Evaluate feasibility of school-based health centers in low-income urban communities - Increase access to care - Reduce high-risk behaviors among adolescents (including unprotected sex)
Approach	School based health centers designed to increase access to medical and health care
Evaluation	
Evaluation Strategy	Comparing users/nonusers at school Comparing these schools / other schools students (urban students) Comparing schools with specific programs and those without

Methodological Weaknesses	Comparison of urban youth was telephone survey only; self-administered survey to SBHC students (although studied this effect). Sampling techniques varied. Attrition = 21% by follow-up. 57% response rate to initial survey (required written parental permission).
Has report been peer-reviewed?	Not the publication, but the outcomes meeting provided discussion and input
Method Used	Percentage difference
Results Process Evaluations Associations Impacts	- School-based health center costs $150,000-$250,000 per year ($18-161, average $77 per patient); problems with 3d-party payers especially limit reimbursement. - No association with high-risk behaviors. Contraceptive efficacy might be better but not clear; at last intercourse, SBHC were worse. - Pregnancy rates not different - Health knowledge increased more among SBHC youth than comparisons. - Researchers think mental health may have been benefited by centers.
Special notes, comments	

Name of Program	Home Visitor Program
Reference/citation	Announcement of the availability of Section 1115 funds for demonstration projects, June 30, 1994, Assistant Secretary for Children and Families
Time Period of Evaluation	Demonstration period October 1994 to November 1997
Sponsor	Administration of Children and Families and Kaiser Family Foundation
Description	
Location(s)	Initially awarded grants for 14-month feasibility period to: Chicago, IL; Baltimore, MD; Dallas, TX; Portland, OR; and Dayton, OH; 3 of the 5 will be selected to continue into a 24-month operational phase.
Sample Size and Population	Targeted to all teen parents, under age 20, who are coming onto the AFDC rolls as first time cases and to teens currently on AFDC as dependent children who become parents for the first time during the demonstration period.
Age/Grade	Under age 20
Goals of the intervention	1) Promote objectives of Title IV of the Social Security Act of strengthening family life and helping AFDC families achieve the maximum self support consistent with the maintenance of parental care and protection of children 2) Add to current knowledge regarding the effectiveness of strategies designed to improve social, personal, health, and economic outcomes among teen parents and their children.
Approach	- Test the feasibility of incorporating home visits as part of the JOBS program in 2 settings in a single geographic location or site: 1) a comprehensive IV-A agency-staffed JOBS program for teen parents; 2) a comprehensive, integrated service delivery program for teen parents operated by a provider under contract to provide JOBS services.
Method	Home visits by para-professionals to establish close relationships with the teens. Visitors will provide instruction and guidance in: 1) enhancing parenting skills; **2) promoting effective family planning;** 3) obtaining appropriate health care; and 4) accessing needed resources and supports, with a special focus on child support, including paternity establishment.

Evaluation	
Evaluation Strategy	- Teens randomly assigned to 3 groups: control group, experimental group which will receive the IV-A agency-staffed JOBS program services and home visits; and experimental group which will receive JOBS services through a community provider program and home visits. - Evaluation by University of Pennsylvania
Methodological Weaknesses	Evaluation still in progress (n/a)
Has report been peer-reviewed?	N/A
Results	Evaluation still in progress (n/a)
Special notes, comments	

Name of Program	**Hull House Teen Pregnancy & Parenting Program (Adolescent Family Life Program -- AFLP)**
Reference/citation	Jeanne C. Marsh and Molly A. Wirick, "Evaluation of Hull House Teen Pregnancy and Parenting Program," *Evaluation and Program Planning* 14, 49-61 (1991).
Sponsor	OAPP, subcontracted by Hull House Association
Description	
Location(s)	Chicago (Near South Center area and Southwest Side Center)
Time Period of Evaluation	4 years in late 1980s (not specified)--last 4 program years (some analyses only 3 penultimate years)
Sample Size and Populations Served	335, extremely disadvantaged, 99% black, service users who recently delivered a baby (female)
Age/Grade of Target Population	Age 18 or less
Goals of the Intervention Program	Prevent subsequent pregnancy; increase birth weights and reduce medical complications for mother and child. Long term: reduce repeat pregnancies, improve educational attainment and employment
Approach	Service delivery program, including life skills; family planning with heavy emphasis on abstinence; staff oriented toward practical assistance
Evaluation	
Evaluation Strategy	Pre-and post treatment (6 months apart) evaluations for four single-year cohorts of clients; follow-up a year later
Methodological Weaknesses	- No comparison or control group - Length of service varied and data may be unclear - Possible year-by-year cohort changes - Most cases lost to follow-up so repeat pregnancy data questionable, and authors assume dropouts more likely to be pregnant again
Has report been peer-reviewed?	Pergamon Press published journal
Method Used	Chi-square tests within cohorts; regression analysis

Results Process Evaluations Associations Impacts	- Process Evaluation: not specifically done, but discussion that providers possibly less oriented toward family planning than toward some other services; - Sexuality and contraceptive knowledge increased significantly. - Proportion using birth control (sometimes or always) increased significantly. - Authors stated that number of repeat pregnancies in one year completely unaffected by intervention; 18% over 3 years, comparable to other programs. - Program contact and length unrelated to outcomes. - Frequency of counseling services contacts and age most predictive of avoiding subsequent pregnancy; being in school at pre-test was third greatest predictor. - No significant effects on using birth control always or at least sometimes.
Special notes, comments	Used measures developed by Urban Institute for the Adolescent Family Life Program (1982)

Policy	**Hyde Amendment**
Reference/citation	Trussell, J., Menken, J., Lindheim, B.L., and Vaughan, B. 1980. The impact of restricting Medicaid financing for abortion. *Family Planning Perspectives,* 12(3):120-130.
Time Period of Evaluation	February to July 1978 (comparable period in 1977)
Sponsor	Government (Law)
Description	
Location(s)	National; Evaluation targets Georgia, Ohio, and Michigan (comparison)
Sample Size and Populations Served	Women eligible for Medicaid
Age/Grade of Target Population	All women
Goals of the Policy	Reduce abortions
Approach	- On February 19, 1980, DHHS again began paying for medically necessary abortions for women eligible for Medicaid. The Hyde Amendment, 1976, had restricted abortions to only cover under Medicaid those that threatened the life of the pregnant woman. In 1977 and 1978, reported rape and incest and severe and long-lasting physical health damage were added to the permissible conditions. In 1979, the latter condition was removed.
Method	
Evaluation	
Evaluation Strategy	CDC reviewed emergency room admissions to 24 sentinel hospitals in several large cities. Researchers from Princeton and AGI sought to measure any changes in the pregnancy outcomes of women who were eligible for Medicaid. Estimates were from either the survey of patients or the survey of administrators of abortion clinics and provider hospitals. Estimates are based on the assumption that the same fraction of women who chose abortion in 1977 would have done so in 1978 if funding conditions had not changed.
Methodological Weaknesses	

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Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- CDC linked 4 deaths of indigent women from illegal or self-induced abortions to the unavailability of Medicaid financing. - Author feels that there was not a significant increase in avoidance of intercourse or improvement in contraceptive use. - Estimate that 23 percent of Medicaid eligible women in Ohio and 18% in Georgia who would have obtained an abortion in 1977 before the cutoff, did not do so in 1978; in Michigan (which continued to pay for abortions), the proportion of pregnancies aborted declined slightly from 39% to 38%. - CDC found that among women who experienced abortion complications requiring a visit to a hospital, Medicaid eligible women in nonfunding states had a 2.4 weeks later mean gestational age than those who were not Medicaid eligible. There was no difference in states which funded abortions. But AGI data of all women showed that Medicaid eligible women wait longer to receive abortion but the difference was only 3 days. - Medicaid women who obtained abortions paid nearly the same amount as more affluent women for their abortions. - Results do not indicate an increase in live births.
Special notes, comments	- Although Michigan did not stop funding abortions, the widespread publicity about the Hyde Amendment may have led women to think that public funding was not available. - Several factors suggest that these estimates may be underestimates. - Although most of the Medicaid eligible women who obtained abortions before the cutoff were able to do so after it, there is documentation of complications of self induced abortion and self mutilation. Judge Blumenfeld cited evidence that many of the indigent women who were able to pay for their abortions were only able to do so by not paying rent or utility bills, pawning household goods, diverting food or clothing money, journeying to another state, or fraudulently using a relative's insurance policy.

Name of Program	I Have a Future
Reference(s)/ Citation(s)	Foster, H.W., Jr., Greene, L.W., & Smith, M.S. (1990). "A model for increasing access: Teenage pregnancy prevention". *Journal of Health Care for the Poor and Underserved*, 1(1), 136-146. Greene, L.W., Smith, M.S., and Peters, S.R. (1995). "'I Have a Future' comprehensive adolescent health promotion: Cultural considerations in program implementation and design". *Journal of Health Care for the Poor and Underserved*, June, 267-281. Greene, L.W. (1995). Personal communication. June 14.
Sponsorship	Carnegie Corporation and W.T. Grant Foundation
Description	
Location(s)	Nashville, TN
Time Period	1987-1991
Sample Size/Population	998 teens (567 Es, 431 Cs); intervention is located in public housing projects
Age/Grade	Aged 10-17
Goals of the Intervention Program	(1) To improve knowledge and attitudes about personal health, including sexuality; (2) to provide access to and increase use of comprehensive adolescent health services; (3) to increase "socially adaptive and appropriate behavior" with focus on school achievement, vocational development, and delinquency rates; and to "enhance the ability of high-risk adolescents to overcome environmental barriers in attaining the skills necessary to pursue meaningful employment and educational opportunities with a promise of upward mobility"; (4) produce more positive self-concepts and constructive attitudes toward community, family life, and the future; (5) to expand education opportunities for health professional students. Specific measurable goals (forms their hypotheses): 1) will reduce the rate of teen pregnancy by promoting abstinence or the provision of contraceptives for sexually active youth; 2) teens in program will have higher scores on psychosocial maturity; 3) teens will get higher scores on measures of knowledge about pregnancy prevention, substance abuse prevention, and job skills; 4) will develop stronger attitudes and values towards delaying pregnancy; 5) will develop more positive attitudes and expectations toward the future; 6) higher self-esteem; 7) more constructive attitudes towards community, family life and the future.
Approach	- Set in public housing projects (gets drop-outs as well, gets kids during idle time, provides better opportunity for involving whole family) - Researchers got community support and trust by involving the Residents' Association from the start and throughout - Program is built on premise that changes in sexual behavior should be sought in a framework that improves self-image and presents positive alternative life options - Developmentally sensitive: emphasizes knowledge, attitudes and awareness for early adolescents, and behaviors for older teens - Following values are present throughout all parts of program: self-esteem, physical and mental well-being, school completion, job skills development, sexual responsibility, self control (esp. in interpersonal conflict), value of helping others, "pro-social" attitudes, and family values - There are many modules to the project--all modules incorporate an edited version of Nguzo Saba, Seven Principles of Blackness--Pro-Social Attitudes: Unity, Self-determination, Collective work and responsibility, Co-operative economics, Purpose, Creativity, and Faith - Examples of modules include the Job Readiness module, and the Alcohol and Drug Abuse Prevention Module - Weekly clinics and enrichment programs at the housing project

Evaluation	
Evaluation Strategy	- Longitudinal, quasi-experimental (2 experimental sites, 2 comparison sites). - Baseline survey at start of project, the second survey (T2) occurred approximately 13 months after baseline, and the third (T3) was approximately 17 months after T2. - Also tested before and after the presentation of each module.
Statistical Methods	T-tests, mean differences, correlations
Methodological Weaknesses	- Selection bias--active participants may be different than low-level participants - The program initially attracted younger youth who participated in program throughout high school years. - Some control and low-level participants lost to follow-up. - Self-report of delinquent behavior
Peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- Program had positive effects on intermediate outcomes such as prosocial attitudes (i.e. sense of responsibility for community and family well being), sexual and contraceptive knowledge, self-esteem, perceived life options, and psychosocial maturity, when comparing active participants to the comparison group. - 59 known pregnancies among comparison youth and only 1 known pregnancy among the active program participants. - Adolescents in program neighborhoods had a greater acceptance of Nguzo Saba values, and there were fewer self reports of delinquent behaviors among those who accepted Nguzo Saba.
Special Comments/Notes	- Active participation was defined as participation in a least 15 sessions of the core modules (n=90). Active participants were younger, less likely to be behind in school, more likely to have skipped classes, less likely to use alcohol, less likely to be working, and at lower pregnancy risk at time 1. - Above results are based on preliminary analyses. The evaluation occurred during the initial stage of the program. All program components were not developed or in place during evaluation. Effect on pregnancy risk behavior unclear.

Name of Program	Man's World Condom Mailing
Reference/citation	Kirby, D., Harvey, P., Claussenius, D., and Novar, M. (1988). A direct mailing to teenage males: Its impact on knowledge, attitudes, and sexual behavior. *Family Planning Perspectives, 21*(1), 12-18.
Time Period of Evaluation	1987
Description	
Location(s)	United States
Sample Size and Populations Served	Males, 1,033 controls and 984 experimental, (53% completion rate, but 86% of males actually reached by phone completed the survey), more middle class than average, approximately representative in terms of race and geographic community. On issue of sexual activity 55% had ever had intercourse, compared to 56% of 17 year old males as found in one national sample of metropolitan area males.
Age/Grade of Target Population	16 to 17
Goals of the Intervention	- Pamphlet to present facts in a straight-forward manner concerning sexually transmitted diseases (STDs), pregnancy, and different forms of birth control. - Sought to eliminate the embarrassment of buying condoms and financial barrier to obtaining condoms
Approach	- Direct mailing of pamphlet called The Man's World and an order coupon (with return envelope) for free condoms. - Order coupon with free offer of condoms mailed to house
Method	Cross tabulations
Evaluation	
Evaluation Strategy	- Purchased list of names of male teenagers believed to be 16-17 and randomly assigned to experimental and control groups - Materials were sent to experimental group; both groups were later (approximately 5 weeks) interviewed, via telephone, for data on their knowledge, attitudes and behavior.
Methodological Weaknesses	- Short, one time intervention and short term follow-up
Has report been peer-reviewed?	Yes

Results Process Evaluations Associations Impacts	- 72% of the experimental group (Es) recalled having received the materials, 90% of whom claimed to have read it, one-third showed it to their friends, and almost half talked about it with friends. - Only about 25% of male teens in the U.S. have discussed both sex and birth control with their parents at any time, however, half the males actually showed it to their parents and about one-third discussed it with them. - No statistical differences in background characteristics between those who had received the pamphlet, those who read it, and those who were in the control group. - Es had higher mean scores on knowledge test than controls, but little impact on attitudes such as the probability of getting an STD, perceived cost of getting an STD, probability and perceived cost of getting someone pregnant. One exception is that males who read the mailing had a higher mean score on perceived benefit of using a condom than controls (may be due to self selection). - About 54% of sexually active respondents said they would be more likely to use condoms if they could be ordered by mail. (authors note these claims are notoriously unreliable) - Mailing had no effect on proportion who had ever used a condom or any other method. Use at last intercourse was also non significant. - Es were much more likely to report having ever obtained birth control through a mail order house than controls, but no effect on birth control from other sources. - Follow-up reinterview with the 66 males who ordered the condoms shows that 81% had used a condom in their last act of intercourse prior to ordering the condoms. Since it was so high, it may not have been significantly increased by ordering the condoms. More than a quarter of those who ordered condoms did so before their first intercourse.
Special notes, comments	- Wanted to sample low income males, but their list, in fact, results in a more middle class sample than the U.S. population.

Name of Program	McMaster Teen Program (developed at McMaster University)
Reference/citation	B. H. Thomas, A. Mitchell, M. C. Devlin, C.H. Goldsmith, J. Singer, & D. Watters, "Small Group Sex Education at School: The McMaster Teen Program," in Miller, Card, et al (1992), pp. 28-52
Sponsor	Ontario Ministry of Education & Ontario Ministry of Health
Description	
Location(s)	Hamilton, Ontario, Canada 307,000 pop.: multiethnic, blue-collar, low unemployment, national health care
Time Period of Evaluation	Late 1980s
Sample Size and Populations Served	Experimental N = 2,331; Control=1,843; students in 21 public schools with parental consent
Age/Grade of Target Population	7th and 8th grade students aged 11-16
Goals of the Intervention Program	Primary prevention of unwanted adolescent pregnancy via accurate information, skill acquisition, and responsible decision making
Approach	- Cognitive/behavioral (Skills practice): decision-making, communication skills - Coed groups of 6-8 students led by trained tutors - 10 one-hour sessions over 6-8 weeks - No contraceptive methods taught - Film, group discussion, role play and question and answer
Evaluation	
Evaluation Strategy	- Schools stratified (200+ and < 200 students in grades 7 & 8) and randomly assigned to experimental and control groups. - Pretest, program, 4 post-tests. First at 3 months postprogram; second 12 months after program - Private ballot for sensitive information and placed in sealed envelope. - Self-reported pregnancy compared with health plan data.

Methodological Weaknesses	- By follow-ups, students mingled from experimental and control schools. - Pregnancy fairly rare in age group; health plan information incomplete on miscarriages and abortions - Attrition: 4-5 year follow-up lost 20%. - Consent rate about 90% for program participation. - Lower consent in control group--69%. - Had significantly higher proportion of sexually-experienced males in experimental pretest group--this difference was found to be school dependent, so pretest rate of sexual intercourse by school and gender were added to the model
Has report been peer-reviewed?	Yes
Method Used	Logistic regressions, t tests, chi-square
Results Process Evaluations Associations Impacts	- No effect on rates of sexual intercourse, consistent use of birth control, or pregnancy - Association between absence of educational goal and external locus of control with early sexual intercourse and inconsistent use of birth control among females.
Special notes, comments	Discussion of specific contraceptive methods and their use were not included in program because it is not within Ontario Ministry of Education guidelines for students this age.

Name of Program	Michigan Medicaid Abortion Ban
Reference(s)/ Citation(s)	Metzger, K.R. (1994). "The Medicaid abortion ban in Michigan-four years after". *Protecting Sexually Active Youth (PSAY) Network*, 2(1), 1-4.
Sponsorship	Michigan State Government
Description	
Location(s)	Michigan
Time Period	1981-1992
Sample Size and Populations Served	State-level and city-level analysis of number of births and number of abortions (sample size not relevant)
Age/Grade of Population	Most of analyses are of all women (10-44), but some focus on teens only (10-19).
Goals of the Intervention Program	This is not an intervention program. However, the argument of the campaign that eventually banned Medicaid funding for abortions in Michigan in December of 1988 was that the state should not have to bear the cost of abortions for Medicaid recipients. Advocates of the ban also predicted that eliminating free abortion for the poor would discourage sexual risk taking and therefore reduce unwanted pregnancies.
Approach	Natural experiment (social policy change)
Evaluation	
Evaluation Strategy	Analyzed number of births, abortions & pregnancies, and % of pregnancies ending in births.
Analytic Strategy/ Statistical Methods	All numbers and percents were calculated and averaged over four year periods, starting with 1981-1984, 1985-1988 (four years prior to the ban), and 1988-1992 (the four years immediately following the ban). Author only looked at percent changes over time for these variables.
Methodological Weaknesses	- The main weakness is there is no way to really know if the abortion ban is the cause of the changes observed, and no statistical tests to know if changes that did occur are actually significant changes. - Also, author looks at absolute numbers of births and abortions, instead of rates. Numbers can change because of changes in the overall size of the population. - The author concludes that the ban has had "obvious effects on the number of children born, the numbers of these children born to teenagers, and the resultant health conditions of these infants". This type of analysis does not warrant such a strong conclusion. He has found evidence that may be due to the ban, but no proof.

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Has report been peer-reviewed?	Unclear; this article in PSAY newsletter may be a report based on a more complete article, although it is not cited as they usually do.
Results Process Evaluations Associations Impacts	- The analysis done on the state level did not look at teens specifically. - Detroit was chosen for further analyses because they have large poor, Medicaid-dependent population. - Detroit findings (only those related to teens) in 4 yr periods before and after ban: - an average of 4,100 babies were born to Detroit teens each year before the ban (from 1985-1988); after ban average was 5,400. - this increase in # of births is "roughly" equivalent to the drop in reported abortions to teens in same periods - before ban, 20% of all babies born in Detroit were to teen mothers; after ban it was 25% - before ban, 20% of all babies born to teens had one or more older siblings; after ban, 30%
Special Comments/Notes	- This is an evaluation of state policy. - Analysis should have looked at birth and abortion **rates** in addition to/instead of absolute numbers.

Name of Program	New Chance
Reference/citation	Quint, Polit, Bos, & Cave. September 1994. "New Chance: Interim findings on a comprehensive program for disadvantaged young mothers and their children." New York, NY: Manpower Demonstration Research Corporation.
Sponsor	U.S. Department of Labor and 27 foundation and corporate supporters.
Description	
Location(s)	16 locations in 10 states across country (CA, CO, FL, IL, KY, MI, MN, NY, OR, PA -- primarily urban locations)
Time Period of Evaluation	1989-1996 (follow-up at 18 and 42 months after random assignment).
Sample Size and Populations Served	2,088 young AFDC mothers aged 16 to 22 who are high school dropouts and who were teens when they first gave birth. The young women volunteered for the program.
Age/Grade of Target Population	16-22
Goals of the Intervention Program	Improving academic and vocational skills; delay of further childbearing; strengthening decision-making and communications skills; gain parenting skills; child care & pediatric health care
Approach	Comprehensive and multi-service approach, including education, employment development services, health education, family planning, life skills education, case management, and child care.
Evaluation	
Evaluation Strategy	For the impact analysis, random assignment to experimental or control group was used. Implementation and cost-benefit analyses were conducted as well.
Methodological Weaknesses	
Has report been peer-reviewed?	Reviewed by Adolescent Parents Study Committee (an outside group of experts)
Method Used	Regression adjusted mean and percentage differences with significance levels for impact analysis. Also, considerable integration of impact and implementation analyses.

Results Process Evaluations Associations Impacts	- Process: Average 300 hours participation--lower than anticipated. Controls were receiving similar services with respect to education. - Cost: $9,026 per experimental. - Experimentals earned significantly more GEDs by 18-month follow-up, but did not have better reading levels. - Experimentals earned more college credits. - Slightly more pregnancies and abortions among experimentals. Experimentals were also more likely to be living with a partner at follow-up. - More experimentals expected to have another child in 13-48 months, and more experimentals were sexually active and not contracepting regularly. - HOME score for emotional support higher among experimentals' children; more child care use by experimentals. - No health outcomes differences for mothers or children.
Special notes, comments	- New Chance is a program option states can adopt under the JOBS program - Eighteen months may be too short a time to reveal whether educational differences will persist. - 42 month impacts, available in 1996, will be important in determining the effectiveness and cost effectiveness of the program.

Name of Program	New Futures
Reference/citation	The Center for the Study of Social Policy, 1995. "Building New Futures for At-Risk Youth: Findings from a Five Year, Multi-Site Evaluation", Washington, DC: Center for the Study of Social Policy.
Sponsor	The Annie E. Casey Foundation
Description	
Location(s)	Bridgeport, CT; Dayton, OH; Little Rock, AR; Pittsburgh, PA; and Savannah, GA
Time Period of Evaluation	1988-1992
Sample Size and Populations Served	Sample size not given. All New Futures cities had the following characteristics: populations between 100,000 and 500,000; at least 30% minority enrollment in public schools; high rates of poverty, dropping out and teen pregnancy; the commitment of local leadership and the community's willingness to address youth and family issues.
Age/Grade of Target Population	Middle school and High school students
Goals of the Intervention Program	To help more youth become productive adults by: 1) reducing the school dropout rate; 2) improving students' academic performance; 3) preventing teen pregnancies and births; 4) increasing the number of youth who go on to a job or college after high school.
Approach	Institutional change: existing institutions were to be restructured to be more responsive to the needs of at-risk youth and their families. Each city developed a new local governance of bodies, called collaboratives, made up of elected officials, business persons, public administrators from various agencies, parents and community representatives. The collaboratives were incorporated as non-profit corporations. The collaboratives were charged with devising new policies and practices for meeting the needs of at-risk youth while maintaining accountability for positive outcomes. Each collaborative developed case management systems to provide services and supports to youth. They also spent their money on a range of interventions directed at preventing school dropouts, adolescent pregnancy, and youth unemployment.
Evaluation	

Evaluation Strategy	Process: Monitoring of the New Futures cities: Their main process questions were to what extent were they successful in developing the collaboratives, and to what extent were the collaboratives able to make lasting institutional changes in the way services were financed, administered, and delivered. Associations: Measured the improvement of 10 outcomes (school attendance, achievement as measured by standardized tests, course failures, over age for grade, retentions, in-school and out-of-school suspensions, dropout rates, graduation rates, pregnancy and parenting rates, and postgraduation plans for employment or college) in the pilot schools and city-wide, by collecting aggregate data on school experiences, pregnancy/parenting rates, and postgraduation plans of all students in the public schools in each New Futures city.
Methodological Weaknesses	-No comparison group; can't be compared to national rates due to special sample. -Selective "sample"; all cities had to show that their was a strong commitment to addressing these issues and they were selected on various criteria, including "the probability that proposed interventions would result in bona fide institutional changes. -No significance tests of changes
Has report been peer-reviewed?	No
Method Used	Measurement of outcomes at beginning, throughout, and at end of program using a sample survey of students attending middle and high school in each New Futures city.
Results Process Evaluations Associations Impacts	Associations regarding changes in sexual activity, pregnancy and parenting rates: - The percent of students who had ever had sex declined from Year 1 to Year 5 in every city. The percentage point change ranged from 1 point to 11 point differences. - Of those who had had sex, the percent who used birth control the last time increased from Year 1 to Year 5 in every city; the increase ranged from 8 to 29 percentage points - The percent who were ever pregnant increased in both middle and high schools in all but one site; the increase was small, ranging from 3 to 6 percentage points. The exception was in Dayton middle schools, where there was no change from Year 1 to Year 5. - The percent who had or fathered at least one child also increased from Year 1 to Year 5 in every city; again, the changes were small, ranging from 1 to 3 percentage points.
Special notes, comments	Employment and education outcomes were also analyzed in this report.

Name of Program	New Jersey Sex Education Program
Reference/citation	Firestone, W.A. (1994). The content and context of sexuality education: An exploratory study in one state. Family Planning Perspectives, 26(3).
Time Period of Evaluation	Surveyed teachers in Spring 1992; Public opinion poll of New Jerseyans conducted in February 1992
Sponsor	State Board of Education
Description	
Location(s)	New Jersey
Sample Size and Populations Served	- 506 family life educators (list of 2,244 family life educators obtained by sending letters to all superintendents requesting names of all family life education instructors in each district, 245 of 558 superintendents responded; a multistage sampling process selected 1,200 of the educators, to be representative of state regions and district wealth; 506 of the 1,200 responded--42% response rate) - 800 New Jerseyans aged 18 and older (sampling error of 3.5%)
Age/Grade of Target Population	Primary, middle, and high school, specific grade varies by school
Goals of the Intervention	Not specifically stated, may depend upon district
Approach	Sex Education: In 1967 the state Board of Education recommended that school districts have sexuality education curricula, but by 1979 only 40% of districts had coordinated programs. In 1979, a new regulation required that a family life education curriculum be taught in every grade, from kindergarten on, and identified 20 specific topics to be covered by the end of 8th grade and another 13 to be covered before graduation. These topics included plant and animal growth and reproduction, human reproduction, dating, child abuse and assault, and sexually transmitted diseases (STDs). Regulations allowed parents to have their children excused from such instruction. Opponents forced the state senate to review the new regulations and they were revised. Family life education was to be offered in elementary and secondary school, but not at specific grades. Curricula had to be developed locally, with representation from the community.
Method	Descriptive tabulations

Evaluation	
Evaluation Strategy	- Survey of sexuality education teachers (in depth exploratory interviews were conducted with 22 family life education teachers and 11 administrators prior to this). Multistage sample selection of family life educators who were mailed questionnaires. - Eagleton Poll of public opinion is a random sample of New Jerseyans interviewed by phone
Methodological Weaknesses	- No assessment of impacts - Low response rate among family life educators
Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	**Process:** - Almost all students receive family life education, but teachers do not necessarily spend a lot of class time on it (24 hours a year). - Information such as how to get and use contraceptives is rarely provided except among high school students. - Teachers think that topics such as sexual expression without risk, contraceptive use, and risks of premature sex should be introduced in 7th grade (modal response); but the tendency is to hold sexuality education until later grades. - Educators were more likely to say that their objective was to provide facts than to deal with feelings or guide behavior. - Virtually none of the educators reported that condoms were distributed in their school; 50% said they discuss condom use with classes; 20% demonstrated how to put a condom on (more experienced teachers, high school teachers, and male teachers more likely, and low income districts). - Most use teacher-directed instruction rather than active strategies such as role play and peer leadership. - Class discussion is most frequent approach. - Public opinion strongly supports sex education in New Jersey, but only 51% think it should be required. - Teachers and administrators still fear opposition. - Sex education curriculum does not match the profile of programs that have been most successful in helping teens avoid pregnancy, AIDS, and STDs.
Special notes, comments	

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Name of Program	New Jersey's Family Development Program (FDP)
Reference/citation	M.C. Laracy. 1994. "The Jury is Still Out: An Analysis of the Purported Impact of New Jersey's AFDC Child Exclusion (a.k.a., "Family Cap") Law." Washington, DC: Center for Law and Social Policy. Wolfe, B.L and Ooms, T. 1995. Welfare Reform in the 104th Congress: Goals, options, and tradeoffs: Lessons from research state experience. Series of forums for Congressional staff cosponsored by the Institute for Research on Poverty and the Family Impact Seminar, February 13 and March 24.
Sponsor	State of New Jersey: program was a package of 6 welfare reform bills; builds upon the state's JOBS program known as REACH
Description	
Location(s)	Started in 3 counties (Essex, Hudson, Camden) in Oct. 1992; 5 phased in by Oct. 1993; 13 remaining counties started FDP in Jan. 1995.
Time Period of Evaluation	1993
Sample Size and Populations Served	Welfare recipients (prior to conception of "target" child) -- about 35-40% of AFDC births
Age/Grade of target population	Women of childbearing age & their children
Goals of the Intervention Program	- Emphasis on assessing and providing for the needs of the whole family, strong emphasis on investing in education, and the establishment of one-stop family resource centers in each county. - Law attempts to encourage responsible parental decision-making with a family cap (no additional money for children born once on AFDC). - Reduce marriage disincentives
Approach	- AFDC case manager assesses needs of whole family; provides services/referrals (i.e., substance abuse treatment, basic education, etc.) - AFDC client and case manager develop outline of education and job goals and case manager is responsible for coordinating service plan, monitoring progress, and reassuring the needs as necessary. - Elimination of $64-$102 per month of AFDC grants for additional births (occurring at least 10 months after month of mother's application for AFDC) to mothers already on AFDC; no effect on food stamps - Two parent families now receive assistance at the same rate as their federally assisted counterparts. - Each participant/family member has the opportunity to attain high school education, if consistent with the participant's employment goal. - In some counties, participants are allowed to attend higher education (4 year colleges/ community colleges). Case managers assist participants in obtaining grants to pay the tuition. State monies used as a lever to encourage schools to adapt their regular programs for welfare clients (i.e., more hours during the week, programs during the day). - Family Resource Centers: community-based facility that provides multiple services such as family counseling, child care counseling and referral, job development/ placement services, family support, educational resource development and social/health services info/referral.

Evaluation	
Evaluation Strategy	Governor compared birth rates before and after law enacted
Methodological Weaknesses	- Such data were not yet available; preliminary numbers used - Causality can not be inferred or proven using this method; any number of factors could be the cause of declining birth rates. - Too short a time period to tell if law has had any effects - Movements out of state not counted - Abortion data not available - It is impossible to tell what proportions of the apparent decline in birth rates occurred within the targeted population and within the exempt population; much of the decline may have occurred within the 60 to 65% of the AFDC births not affected by the law.
Has report been peer-reviewed?	No
Method Used	The percent reduction in number of children born to AFDC families in January 1994, compared to 1992
Results Process Evaluations Associations Impacts	- The January 1994 birth rate (live births per thousand AFDC cases) was 9.73% lower than in January of 1993.
Special notes, comments	- Although these results are based on pre/post "intervention," the evaluation design required and implemented for the whole demonstration has an experimental design. - Rutgers University will be doing an evaluation on the randomly assigned sample of sanctioned and unsanctioned AFDC respondents who were interviewed, which has been used in analyses by June O'Neill (who reports a lower birth rate), and also on the entire caseload. They will be doing additional interviews with respondents as well as looking at data on Medicaid funded abortions. Preliminary data may be available by mid-May of 1995. This evaluation and survey is being supported by funding from DHHS and the Kaiser Family Foundation. Contact Pamela Holcomb at ASPE.

Name of Program	NIH Programs: Minority Youth Health Behavior
Reference/citation	Unpublished description: "Minority Youth Health Behavior Research: The Development and Evaluation of Interventions", Susan Newcomer, 301-496-1174.
Sponsor	NIH
Description	
Location(s)	7 sites: Huntsville, AL; Durham, NC; Seattle; Northern WI; Chicago; Trenton and New Brunswick, NJ; New York City
Time Period of Evaluation	None yet: In 1993 project getting under way (5-year project)
Sample Size and Populations Served	Minority youth
Age/Grade of Target Population	Ages 10-18
Goals of Intervention Program	Seeks to decrease violence, morbidity & mortality, sexually transmitted diseases (STDs) & unwanted/unintended pregnancies; resistance to use of alcohol & other drugs
Approach	- Community input design - Focusses on decision-making skills, impulse control, use of community resources - Use role playing, small groups, films, videos
Evaluation	
Evaluation Strategy	Coordination and data management by The Data Center, at Research Triangle Institute in North Carolina Rigorous evaluations are planned.
Methodological Weaknesses	N/A
Has report been peer-reviewed?	N/A
Method Used	N/A
Results	N/A; In progress
Special notes, comments	Increasing community-related components and adding conflict/violence components are noteworthy

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Name of Program	Norfolk Adolescent Pregnancy Prevention and Services (NAPPS) Demonstration Project
Reference/citation	Kelly, M. (1988). Teamwork: A city's response to adolescent pregnancy (Norfolk, VA). Journal of Home Economics, 80:19-23.
Time Period of Evaluation	Program started in Oct. 1980 and continued to Sept. 1987; not clear when evaluation occurred
Sponsor	Office of Adolescent Pregnancy Programs
Description	
Location(s)	Norfolk, VA: seven agencies including Norfolk State University, Norfolk Public Schools, Southeastern Tidewater Opportunity Center, Norfolk Department of Health, Norfolk Redevelopment and Housing Authority, Division of Social Services and Norfolk Community Hospital.
Sample Size and Populations Served	Served 1,853 pregnant adolescents
Age/Grade of Target Population	Any teen? in school; Not clear
Goals of the Intervention	1) Prevention of initial and repeat pregnancies 2) Keeping students in school during and after pregnancy 3) Provision of early and adequate prenatal care 4) Prevention of infant mortality and morbidity 5) Development of job skills and job placement opportunities
Approach	A variety of programs in different agencies including: - Alternative school for pregnant adolescents and recently delivered adolescent parents. Provide nutritional counseling and bus tickets to medical appointments. An Infant Day Care Center at the alternative school. - 2 public health nurses teach maternal and child health to pregnant adolescents at the alternative school, manage a clinic at the alternative school, do health follow-ups and home visits. Pregnancy testing provided at the health department. - Hospital provides prenatal care, delivery and counseling services for adolescents who do not have doctors and medical insurance. - Counselor advocate offers individual and group counseling to adolescents and their families on teen pregnancy and prevention. - Youth specialist promotes life skills development, job readiness training, and jobs placement for male and female adolescents. - Paid on-the-job training for up to 20 adolescents per year for students from the alternative school. - School-based health clinic.
Method	Bivariate tabulations

Evaluation	
Evaluation Strategy	**Compared repeat pregnancy rates to a state and national sample**
Methodological Weaknesses	- Not clear that this specific sample is similar demographically to national sample they use for comparison. They give no demographic characteristics and description of evaluation is sketchy. - It seems they only have data on those who took advantage of services; do not say if everyone who ever was a client was followed and for how long. - Say a goal is to prevent initial pregnancy but they make no attempt to find out if they succeeded. - No pre-test/post-test: cannot determine whether their was any change among this sample in pregnancy rates.
Has report been peer-reviewed?	Journal review.
Results	- Repeat pregnancies were experienced by an average of 10% of NAPPS clients compared to 20% nationally.
Special notes, comments	- Weak evaluation: comparability of comparison group unclear, no pre-test/post-test

Name of Program	Nurse Home Visitation
Reference/citation	Olds, D.L., Henderson, C.R., Jr., Tatelbaum, R., and Chamberlin, R. 1988. "Improving the life-course development of socially disadvantaged mothers: A randomized Trial of Nurse Home Visitation." American Journal of Public Health 78(11):1436-1445; Olds, D.L. 1988. "The prenatal/early infancy project." In R.H. Price, E.L. Cowen, R.P. Lorion, and J. Ramos-McKay (eds.) 14 Ounces of Prevention. Washington, DC: American Psychological Association.
Time Period of Evaluation	April 1978 to September 1980
Sponsor	Research funded by Ford Foundation and a Faculty Scholars Award from the Grant Foundation
Description	
Location(s)	Small, semi-rural country of approximately 100,000 residents in the Appalachian region of New York State.
Sample Size and Populations Served	Actively recruited at intake if they had no previous live births and had any one of the following characteristics predisposing them to infant health and developmental problems: age under 19, single parent; low socioeconomic status (SES). Allowed enrollment of any woman who asked to participate and was bearing her first child. Recruited at a free antepartum clinic sponsored by the health department. 500 women interviewed and 400 enrolled between April 1978 and Sept. 1980. Attrition was 15 to 21%.
Age/Grade of Target Population	All pregnant women under 19, but may be older if meet other criteria
Goals of the Intervention	- Change factors that interfere with maternal health habits, infant caregiving and personal accomplishments in the areas of work, education and family planning. - Promote maternal educational and occupational achievements and to reduce the number of subsequent unintended pregnancies.
Approach	- Treatment Group 1: At age 1 or 2, children were screened for sensory and developmental problems and referred to specialists for evaluation and treatment. No services were provided during pregnancy. - Treatment Group 2: Families provided free transportation for regular pre-natal care and well-child care as well as screening in Treatment 1. - Treatment Group 3: Nurse home visitor during pregnancy (approximately once every 2 weeks) plus Treatment 2. - Treatment Group 4: Treatment 3 plus visit by nurse until child age 2 (once a week for 6 weeks after delivery, every 3 weeks from 2 weeks to 4 months ; every 4 weeks from 14 to 20 months; and every six weeks from 20 to 24 months).
Method	ANOVA

Evaluation	
Evaluation Strategy	- Randomized clinic trial. - Interviews at registration, 6th, 10th, 22nd and 46th months of child's life. Planning a 57 month follow-up. - County department social services reviewed records and determined number of days that women and children received public assistance. - Treatment 1 and 2 were combined for analyses when it was determined that there were no differences between these two groups in use of prenatal and well-child care.
Methodological Weaknesses	
Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- Prior to assignment, groups were no different in SES background, but some differences in social support and psychological characteristics, so they were included in models as covariates. - In first 22 months after delivery, nurse-visited poor, unmarried women had 1/3 as many subsequent pregnancies as poor unmarried women in comparison group. - Between birth and 46 months postpartum, reduction was present for the sample as a whole (22% reduction), but concentrated among poor, unmarried women (43% fewer subsequent pregnancies than comparison)
Special notes, comments	- Study was replicated in 1990 in Memphis, TN (see next review). - A fifteen-year NIMH funded follow-up is under way currently; they have located all but one family where the child is still alive and where the families did not ask to be dropped at earlier stages.

Name of Program	Nurse Home Visitation
Reference/citation	Olds, D.L. "Studies of prenatal and infancy nurse home visitation". Unpublished manuscript, Colorado: University of Colorado Health Sciences Center.
Time Period of Evaluation	Recruited June 1990 through August 1991; followed through 24 months postpartum
Sponsor	Information not given
Description	
Location(s)	Memphis, TN (urban)
Sample Size and Populations Served	Low-income African-American women, children, and their families living in major urban area; 1139 women less than 29 weeks pregnant were recruited from the obstetrical clinic at the Regional Medical Center in Memphis; no previous live births, no specific chronic illnesses related to fetal growth retardation or preterm delivery; at least 2 of following "sociodemographic risk" conditions: a) unmarried, b) less than 12 years education, c) unemployed. 92% were African-American, 97% unmarried, 65% aged 18 or younger at registration, 85% below poverty, 22% smoked cigarettes.
Age/Grade of Target Population	Not specifically teens, but 65% were 18 or younger.
Goals of the Intervention	- Help women improve health-related behaviors during pregnancy and in early years of child's life - Promote maternal educational and occupational achievements and to reduce the number of subsequent unintended pregnancies.
Approach	Nurses conducted home visits once a week for first 4 weeks, once every other week for remainder of pregnancy to: - Help women monitor their diets and weight gain - Assessed women's cigarette smoking, use of alcohol and illicit drugs, and facilitated reduction in substance abuse - Teach women how to identify signs of pregnancy complications - Facilitated compliance with treatment Nurses scheduled postpartum visits once a week for first 6 weeks, once every other week from 6 weeks to 21 months, and once a month from 21 to 24 months postpartum to: - Help women adapt to maternal role - Help women clarify their goals with respect to education, work and planning future pregnancies.
Method	Percentage change
Evaluation	

Evaluation Strategy	- After baseline interview, women were randomly assigned to treatment or comparison services (transportation for prenatal care and developmental screening for the children). - Interviews at registration, 28th and 36th weeks of pregnancy, and the 6th, 12th, and 24th months postpartum.
Methodological Weaknesses	
Has report been peer-reviewed?	No
Results Process Evaluations Associations Impacts	- At time of registration, groups were no different in SES background, but some differences in social support and psychological characteristics; were included in models as covariates. **Prenatal Findings (at end of pregnancy):** - Experimentals reported smoking 26% fewer cigarettes than comparisons, 46% less alcohol consumption; were 58% more likely to use community services, and had 24% fewer cases of preeclampsia. **Caregiving Findings (6th, 12th and 24th months postpartum):** - At 6th, 12th and 24th, treatment women reported fewer beliefs associated with child abuse than comparisons; at 12th and 24th, the homes of experimental women were rated as more conducive to children's intellectual and socioemotional development; reported more frequent breast-feeding during first six months of child's life; children born to mothers with limited psychological resources were observed to be more responsive to their mothers and to communicate their needs more clearly than did children born to low-resource mothers in the comparison group. **Maternal Life-Course Findings (24th month postpartum):** - Nurse-visited women reported substantially greater sense of mastery over their life circumstances; 26% fewer pregnancies; and 20% greater household incomes than did women in comparison group; treatment women with high psychological resources reported 29% less AFDC enrollment than did high-resource comparison moms.
Special notes, comments	- This study is a replication of one done in 1980 in Elmira, New York (see previous review). - Sample attrition at 24 months postpartum was still quite small at 9%. - A five-year follow-up is planned.

Name of Program	OCTOPUS Program
Reference/citation	Isberner, F.R. and Wright, W.R. (1988). Sex education in Illinois churches: The OCTOPUS program. Journal of Sex Education and Therapy, 14(2):29-33.
Time Period of Evaluation	Summer of 1986
Sponsor	Ounce of Prevention Fund and Illinois Department of Children and Family Services
Description	
Location(s)	Illinois
Sample Size and Populations Served	Nine OPF-funded agencies that completed the program
Age/Grade of Target Population	Teens
Goals of the Intervention	- Strengthening personally and socially responsible sexual behavior - Improving interpersonal and family communication - Supporting parents as sex educators for their children - Understanding one's own religious view on sexuality - Involving churches in the prevention of teenage pregnancy
Approach	- Involves the church with local agencies in offering teens and parents sexuality education with a special emphasis on teen-parent communication. - Four 2-hour weekly sessions usually during the church's regular Sunday evening youth group meeting. - Includes discussion of family communication, structured communication exercise, reproductive and contraceptive information, decision making skills, and church's view.
Method	Telephone survey of nine OPF-funded agencies that completed OCTOPUS program

Evaluation	
Evaluation Strategy	- Assessed agency, church, and participant demographics; program description; program costs; team member training needs; feedback on the training manual; and participant evaluations.
Methodological Weaknesses	- No impact evaluation
Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	**Process:** - Church denominations included: 4 Methodist, 2 Lutheran, 1 each Unitarian, Church of Christ, and Soul Revival. - Costs ranges from $0 to $400 for pamphlets, copying, travel, film rentals, refreshments, folders, paper, and pencils. Similar costs for child care. Required 1-4 staff members, giving 10-50% of their time, for approximately 4-9 months. - Do not include participant evaluations because of small response.
Special notes, comments	

Name of Program	Ohio's LEAP Program (Learning, Earning and Parenting)
Reference/citation	Bloom, Fellerath, Long, & Wood: Interim Findings on a Welfare Initiative to Improve School Attendance Among Teenage Parents. MDRC: May 1993 Bloom, Kopp, Long, & Polit: LEAP: Implementing a Welfare Initiative to Improve School Attendance Among Teenage Parents. MDRC: July 1991
Sponsor	Ohio Department of Human Services (evaluation also sponsored by Ford Foundation, George Gund Foundation, Cleveland Foundation, BP America, True-Mart Fund, Procter & Gamble Fund, & U. S. Department of Health and Human Services)
Description	
Location(s)	Ohio; intervention implemented in 12 of 88 counties including Cleveland, Columbus, Cincinnati, Toledo, and Canton (½ AFDC caseload) in 1993 evaluation
Time Period of Evaluation	1989-1993 (reports 1991, 1993, 1995)
Sample Size and Populations Served	1,188 teen mothers receiving AFDC Sample much more urban than state as a whole
Age/Grade of Target Population	Teens
Goals of the Intervention Program	- Prevent school dropout, facilitate return to school by dropouts - Postponement of subsequent births
Approach	Payment/sanctions of $62 per month for school attendance of pregnant and parenting teens on welfare; eligibility ends with diploma, GED, or turning 20.
Evaluation	
Evaluation Strategy	- Survey, school records, LEAP and AFDC records, focus group discussions - Random assignment to program or control group

Methodological Weaknesses	- School opportunities vary in different counties, as does LEAP staff involvement in access of different educational alternatives. - Also other county differences - GED not an option unless > 18 or officially withdrawn (and permission to withdraw officially varies by locale) - May have simply accelerated school completion among those who would have finished on their own (too short an evaluation period so far) - Pregnancy status at time of random assignment unclear
Has report been peer-reviewed?	No
Method Used	Tabulations by program/control group
Results Process Evaluations Associations Impacts	- Early evidence of impacts on high school graduation and GED receipt; more follow-up needed - Cost is $330 per year per teen retention - Enrollment impacts generally greater on younger teens and those with fewer children - Experimental (Es) teens were more likely to stay in school and more likely to return if they dropped out than controls (Cs); 10% difference in retention; 13% difference in return of dropped-out teens - Recent dropouts often returned to high school; responded quickly - Longer term dropouts rarely returned to high school; responded more slowly - Daily high school attendance improved; GED attendance did not improve
Special notes, comments	- Program feasible, not easy to implement program because of school monitoring problems

Name of Program	Parents Too Soon Program
Reference/citation	Ruch-Ross, Jones, & Musick, (1992). "Comparing Outcomes in a Statewide Program for Adolescent Mothers With Outcomes in a National Sample," *Family Planning Perspectives*, 24: 66-71,96.
Sponsor	Evaluation: Woods Charitable Trust Programs: Ounce of Prevention Fund (OPF)--Illinois Department of Children and Family Services
Description	
Location(s)	27 community-based sites in Illinois
Time Period of Evaluation	Participants entering between 7/1/85 and 6/30/87
Sample Size and Populations Served	1,004 OPF teen mothers in program; 790 teen mothers in National Longitudinal Survey of Youth (NLSY) used as comparison group
Age/Grade of Target Population	Aged 13-19 (45% 16-17, and 19% under 16 at OPF baseline)
Goals of the Intervention Program	Delaying subsequent pregnancy; fostering economic self-sufficiency; developing parenting skills; and ensuring healthy development for the child (latter goal not here evaluated)
Approach	Family support & education model: 1) home visits by paraprofessionals 2) parent groups using peer-support model offering education on child development, child health information, and emotional support
Evaluation	
Evaluation Strategy	- Comparison of statewide program participants with NLSY adolescent mothers (controlling for age, ethnicity, marital status differences) - Baseline & baseline + 12 months

Methodological Weaknesses	- Self-selection into program - No information on program dropouts - Site variations - Sample differences (age, ethnicity especially) between OPF and NLSY were quite large; e.g. NLSY teen mothers were older at first birth - Measures differences: NLSY didn't measure subsequent pregnancies consistently, so they had to use a measure that indicated the number of months between births, coding those who had a second birth within 21 months of the first. OPF was able to measure pregnancies since intake; however, this should make for more conservative estimate of OPF's effectiveness.
Has report been peer-reviewed?	Yes
Method Use	Multivariate models: logistic estimates and odds ratios (& 95% confidence intervals)
Results Process Evaluations Associations Impacts	- OPF mothers less likely to have second pregnancy, more likely to be enrolled in school, and more likely to be employed. - Being married associated with less likely to be enrolled in school, as was being non-black or being employed at baseline --- may wish to focus on married teens or discourage employment if it's affecting school completion
Special notes, comments	- Earlier evaluation (see review of Rowitz, Telleen, et al., 1987)

Name of Program	Parents-Too-Soon Program
Reference/citation	L. Rowitz, (P.I.) & Telleen, Herzog, Gordon, Paveza, Rydman. 1987. *Illinois Parents-Too-Soon Program Services to Pregnant and Parenting Teens,* (Tables discussed but not included in Volume I).
Sponsor	Program: State of Illinois Evaluation: Joyce Foundation, Chicago
Description	
Location(s)	Various Illinois sites
Time Period of Evaluation	January 1984 through May 1985
Sample Size and Populations Served	1,109 teen mothers with one child but not pregnant at intake (focussed on sample of poor, unemployed teen mothers) Sample included a few males (5%) & females living in high-risk counties (52% black)
Age/Grade of Target Population	14% age <15, 57% age 16-18, and 29% age 19 or older
Goals of the Intervention Program	- Prevention of unwanted pregnancies - Prevention of teen-birth risks - Help with parenting problems
Approach	Child development and parenting education, peer support groups, counseling, day care, home visitors
Evaluation	
Evaluation Strategy	- Participant intake form, 3 follow-up forms, and a monthly participant service log - Data collection at intake, 3-4 weeks after intake, and 3 and 12 months after intake
Methodological Weaknesses	- Program voluntary, so self selection bias - No control group
Has report been peer-reviewed?	No
Method Used	Regressions, cross tabulations

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Results Process Evaluations Associations Impacts	- Mid-80s cost per participant from $356 to $2306. Day care was biggest expense. - Repeat pregnancy lower for those who stayed with program 12 months; those not pregnant at intake less likely to be pregnant than general population. - 84% use of birth control by Social and Parenting Services participants, compared to 74% among those who didn't participate in that. - Sexually active : no differences. - Large increase in birth-control pill use between 4 weeks in program and 12 months in program.
Special notes, comments	- Lutheran Social Services = model service and referral network; low-cost (many volunteers)

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Name of Program	Perry Pre-school Program
Reference/citation	Haskins, R. 1989. "Beyond metaphor: The efficacy of early childhood education." American Psychologist 44(12):274-282. Weikart, D.P. 1989. "Quality preschool programs: A long-term social investment". Occasional Paper Number Five, Ford Foundation on Social Welfare and the American Future, New York, NY: Ford Foundation.
Time Period of Evaluation	1962-1980
Sponsor	Not stated
Description	
Location(s)	Not stated
Sample Size and Populations Served	Of 3,593 children who originally participated, 2,008 were located and submitted to at least part of the 1976 follow-up.
Age/Grade of Target Population	Under 5
Goals of the Intervention	- Providing children with knowledge and social competence thought to be necessary for normal development in public schools
Approach	Pre-school education: Any group program for children under age 5 with explicit purpose (stated above)
Evaluation	
Method	Not clear
Evaluation Strategy	- Best of programs were organized into a consortium by Irving Lazar during the mid-1970s (11 programs). - Originated between 1962 and 1972 and collected standard set of information on development and performance; follow-up in 1976, when children were aged 9-19 and 1979-1980 when aged 12-22. - Projects were divided into five that featured random assignment to a program and control group and 6 that did not. - Long term results (pregnancy): 4 of the Consortium projects and 1 that was not part of the Consortium reported results 10 years or more after the end of the preschool project.
Methodological Weaknesses	- Not a lot of information about the methods because this is a review article
Has report been peer-reviewed?	Yes

Results Process Evaluations Associations Impacts	- 2 projects reported results for teen pregnancy: neither found significantly fewer pregnancies among girls who attended pre-school, but both projects reported hints of possible effects. Haskins points out that the rate of teen pregnancy in the Weikart project was lower for program females than control females, but not significant at the .05 level. Weikart reports his findings as significant at the .10 level. In the Gray et al. project, 7 of 8 program girls who got pregnant returned to school, but only 1 of 6 control girls did so. Suggests that quality pre-school programs may have a moderate impact on the frequency or the consequences of teen pregnancy. - On measures of life success such as teen pregnancy, delinquency, welfare participation, and employment, there is modest evidence of positive impacts for model programs, but virtually no evidence for Head Start. - None of the other model programs, including those in the Consortium, produced results as dramatic as the Perry project on teen pregnancy, crime, welfare, and employment.
Special notes, comments	

Name of Program	Plain Talk
Reference/citation	Debra Delgado, "The Annie E. Casey Foundation's Plain Talk Initiative," *TEC Networks*, Dec. 1994
Sponsor	Annie E. Casey Foundation
Description	
Location(s)	Atlanta, San Diego, Hartford, Seattle, New Orleans, & Indianapolis
Time Period of Evaluation	(To be done by Public/Private Ventures)
Sample Size and Populations Served	San Diego: Hispanic; Seattle: large Asian component--Vietnamese, Cambodian but African-Americans, Whites, Hispanics also; Indianapolis: White; Atlanta: African-American; Hartford: Latino/African-American mix; New Orleans: African-American
Age/Grade of Target Population	Ages 12-18
Goals of the Intervention Program	Prevent pregnancy and sexually transmitted diseases (STDs)
Approach	- Community-based protection for sexually active youth: consensus building, with clear and consistent messages from adults and institutions in the lives of youth - Community understanding via on-site ethnographers - Isolation of sources of influence and pockets of resistance
Evaluation	
Evaluation Strategy	- Baseline surveys with cross-section of youth - Will be repeated toward the end of the implementation phase
Methodological Weaknesses	- Won't be able to randomly assign or have other close comparison group when whole community is involved
Has report been peer-reviewed?	No
Method Used	N/A

Results Process Evaluations Associations Impacts	N/A
Special notes, comments	- Community mapping: locals worked on strategy and collected initial data -- sexual activity levels surprised some communities. A lot of variation among sites, however. Sexual initiation by age 16: 85% Atlanta, 48% Seattle - San Diego: recent Mexican immigrants much less likely to be using protection than Mexican American or Black teens

Name of Program	Postponing Sexual Involvement
Reference/citation	Howard, M. and McCabe, J.B. (1992). An information and skills approach for younger teens: Postponing Sexual Involvement program. In Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J. Preventing adolescent pregnancy. Newbury Park, CA: Sage Publications; Howard and McCabe. (1990). Helping teenagers postpone sexual involvement. Family Planning Perspectives, 22:21-26. Howard, M. "Delaying the start of intercourse among adolescents." Adolescent Medicine: State of the Art Reviews 3(2):181-193.
Sponsor	Henry Ford Foundation for funding and program by Henry W. Grady Memorial Hospital in Atlanta.
Description	
Location(s)	The evaluated youth were drawn from 53 schools in Atlanta, GA; the PSI program was provided in a selected number of these schools
Time Period of Evaluation	Summer 1985- Spring 1987
Sample Size and Populations Served	Youth born at the hospital in 1971-72 and whose families had received services at the hospital since 1981 (low-income at birth and remained in poverty) were selected to be evaluated. These youth were assigned to the program or comparison group, and the schools where the program youth attended received the PSI program, while the comparison youth's schools received a basic sexuality education program. Youth had to be entering the 8th grade in the fall of 1985, had to be a resident of Atlanta area county, and parental permission to participate (99% gave permission). Data were collected for 665 youth (two-thirds of those with parental consent). 608 completed the follow-up at the beginning of 9th grade and 560 by the end of 9th grade. 303 completed all interviews through 12th grade (retention 81-85% after 1.5 years and 43-56% after 4-4.5 years; total of 52% after 5 years).
Age/Grade of Target Population	8th graders; 13 to 14 years of age
Goals of the Intervention	- Education program to provide youth with basic factual information and decision-making skills related to reproductive health, knowledge of contraceptives and how to use them effectively. - Postponing Sexual Involvement component added to give youth more skills to deal with social and peer pressures that lead them into early sexual involvement.
Approach	- The intervention program: 5 class sessions designed to both help young people understand more about social and peer pressures toward sexual involvement and to aid them in developing and applying resistance skills; 5 class sessions on sexuality information. - The comparison schools received 5 class sessions of factual and decision-making education. - PSI sessions are led by 11th or 12th grade male and female trained team leaders. - PSI stresses abstinence but provides information about contraception.

Evaluation	
Analytic Method	Cross-tabulations
Evaluation Strategy	- Divided youth into treatment and comparison groups based on their school system: Atlanta received the program and 3 smaller systems did not and served as the comparison. Pretest showed groups were similar. - 6 telephone surveys over a 5 year period: beginning, middle and end of 8th grade; beginning and end of 9th grade; and end of 12th grade. - To avoid problems that could arise if the young person had to respond in the presence of others in the home, study youth were given verbal codes to use in answering sensitive questions. - Subjects did not know this was a program evaluation. - Continued to follow up students even if they dropped out of school - Used medical records to verify reported pregnancies
Methodological Weaknesses	- No random assignment to program and comparison groups, but no statistically significant background differences prior to intervention. - Has 18 cases with inconsistent data on time of sexual initiation. - Not multivariate
Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- By end of 8th grade, treatment teens were significantly less likely to have had sex than comparison group (neither lack of opportunity for sexual involvement nor lack of a boyfriend/girlfriend accounted for the difference); treatment continued to be less likely through 12th grade (but not statistically significant). - End of 9th grade: Treatment group who did have sex were more likely to say I had sex 1 or 2 times (as compared to more often) or I used to have sex but don't anymore; comparisons were more likely to say I have sex often or I have sex sometimes. By 12th grade this effect disappeared. - End of 9th grade: Treatment more likely to use birth control, and if they used were twice as likely to say it was because of what they learned in school. By 12th grade no difference. - Treatment females by 12th grade were less likely to report having been pregnant; difference for boys too, but it is quite small.
Special notes, comments	- Program is aimed at pre-teens. - Followed up on drop-outs. - Verified self-reported pregnancies with medical records.

Name of Program	Primary Prevention of Adolescent Pregnancy
Reference/citation	L.D. Gilchrist and S.P. Schinke. 1983. "Coping with contraception: Cognitive and behavioral methods with adolescents," *Cognitive Therapy and Research,* 7, 379-388.
Sponsor	NICHD and Bureau of Community Health Services (Health Services Administration) grants to University of Washington Child Development and Mental Retardation Center, administered through U.S. Public Health Service, DHHS.
Description	
Location(s)	Middle class, suburban public high school, enrolled in required speech classes
Time Period of Evaluation	Not given; probably 1979-80
Sample Size and Populations Served	107 high school students (65 M, 42 F) in required speech classes; 102 White, 3 Black, 2 Native American; 96% had prior sex education
Age/Grade of Target Population	High school students grades 10-11 (8 % were seniors; 56% sophomores and 36% juniors); median age 15.65, SD = .8
Goals of the Intervention Program	Improving interpersonal skills and decision making to prevent unwanted adolescent pregnancy
Approach	- Cognitive-behavioral skills training: Verbal and nonverbal communication skills taught by M.S.W. interns aged 28 and 29 (M and F) - Cognitive skills training: reproductive and contraception information, helped adolescents relate facts to themselves, problem solving. - Behavioral skills training: role playing, coaching, instruction, and corrective feedback. Outside assignments such as requesting birth control information from a community vendor and pricing contraceptive products in local drug stores. - Meetings daily for 2 weeks for ten 50-minute sessions
Evaluation	
Evaluation Strategy	- Random assignment to 2 experimental groups and 1 control group. - Between-group differences tested on knowledge; role plays; social realism (blind rating by experienced nurse using Likert scales); problem solving; communication skills; a problem-solving performance score (involving counts of opportunity for intercourse or birth control and plans and consequences); single social adequacy score; and self efficacy scales

Methodological Weaknesses	- Measured outcomes were artificial, not what teens actually did in these types of situations in real life. - Extremely short (two-week training/ four-week total) format cannot measure pregnancy or contraceptive use, or even sexual behaviors that don't occur often. No control group remaining for later tests (became treatment groups right after post test), so no long-term evaluations possible. - Can't generalize beyond this population of primarily white, suburban, sophomores and juniors. - It's clear that the problem-solving performance scores would be influenced by training in the area of sexual opportunity, risks, and plans for resolution just by having recent intensive discussions of these topics. - Also, individual components cannot be examined separately. - No information on regularity of student attendance mentioned. - Small Ns in each group.
Has report been peer-reviewed?	Yes
Method Used	Chi-square on pretreatment differences between experimental and control groups; Wilcoxon rank sum test comparing treatment and control group results was converted to standardized z scores for interpretation ease
Results Process Evaluations Associations Impacts	- No pretreatment differences - Researchers found significantly higher scores on interpersonal skills they wanted to impart (including refusals of unwanted demands). - Treatment group scored better on knowledge inventory, had more positive attitudes toward birth control, and were more likely to intend to use contraception at next intercourse - Treatment group engaged in more effective problem solving, had better communication skills (coded from a videotape) - Blind rater (nurse) of closure--bringing up an issue and settling it; assertiveness--getting what you want; empathy; and adherence to social standards and norms strongly favored the treatment group.
Special notes, comments	- Captive audience; if attendance is good, makes schools easy sites to work with. Their prior work had been with smaller groups and they felt larger groups worked well, and were more likely to be useful for schools. - Earlier evaluation in 1979 (see Schinke, Gilchrist, and Small, 1979)

Name of Program	Primary Prevention of Adolescent Pregnancy
Reference/citation	Schinke, S.P., Gilchrist, L.D., and Small, R.W. 1979. Preventing unwanted adolescent pregnancy: A cognitive-behavioral approach. American Journal of Orthopsychiatry, 49(1):81-88. Schinke, S.P., Blythe, B.J., and Gilchrist, L.D. 1981. Cognitive-behavioral prevention of adolescent pregnancy. Journal of Counseling Psychology, 28(5):451-454.
Time Period of Evaluation	Not specified
Sponsor	NICHD and Bureau of Community Health Services (Health Services Administration) grants to University of Washington Child Development and Mental Retardation Center, administered through U.S. Public Health Service, DHHS.
Description	
Location(s)	Large public high school
Sample Size and Populations Served	19 female and 17 male students
Age/Grade of Target Population	Sophomores in high school; mean age = 15.89 years
Goals of the Intervention	Help adolescents acquire skills necessary to avoid unwanted pregnancies
Approach	- Based on premise that many adolescents get pregnant not because they lack relevant information, but because they lack cognitive and behavioral skills necessary to use information. - Curricula should include accurate information on reproductive biology, contraceptive methods, pregnancy resolution options, and the place of sexuality in normal adolescent development. - Identify perceptual problems early in training by asking participants to summarize presented content and have them apply their new knowledge to hypothetical situations. - Get adolescents to make self statements which relate impregnation/pregnancy vulnerability to themselves. Training in decision making also includes the anticipated consequences of any decision. - Teach decision implementation using modeling, role play, feedback, and coaching. - 14 50-minute group sessions led by a female and male graduate student intern in an MSW program (ages 29 and 28)

Evaluation	
Method	Means and t-tests
Evaluation Strategy	Random assignment to one condition of a Soloman four group research design: - Pretest, training and posttest; - Training and posttest; - Pretest and posttest; and - Posttest only.
Methodological Weaknesses	- Small sample - No long term effects assessed
Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- Those who received training had significantly greater posttest knowledge of human reproduction and birth control and had better problem solving skills (specifying interpersonal problems, identifying obstacles to solving them, and generating potential solutions). - Those who were trained were rated from videotapes to have better eye contact with opposite sex interpersonal partner, better use of the declarative "No" in response to social pressure, statements expressing refusal to risk pregnancy, and better at making requests that partner share responsibility for birth control and cognate sexual decisions. - Six month follow-up: those who were trained had better attitudes toward family planning, more habitual contraception, greater protection at last intercourse, and less reliance on inadequate birth control. - Subjective feedback was positive towards program.
Special notes, comments	

Name of Program	Project LEAD: High Expectations! (PLHE)
Reference/citation	F.R. Walton, V.D. Ackiss, and S.N. Smith, 1991, "Education versus schooling, Project LEAD: High Expectations!" *Journal of Negro Education, 60*, No. 3: 441-453.
Sponsor	Office of Substance Abuse Prevention and The Links Foundation, Inc.
Description	
Location(s)	77 cities at 101 sites
Time Period of Evaluation	Program: 1987-1990 over 4000 youth completing program Evaluation: Not clear; a large number and perhaps all of these were involved in pre-post test comparisons
Sample Size and Populations Served	Aimed at high risk African-American youth (latch-key children in particular, as well as children of substance abusers and low-income youth at risk of drug abuse and pregnancy); recruited by site personnel; no information on numbers, ages, sex, or locations
Age/Grade of Target Population	Not stated
Goals of the Intervention Program	Prevention of drug abuse, unintended pregnancy, and sexually transmitted diseases; increase in aspirations and self worth
Approach	- 5-module prevention curriculum (on values; decision making; prevention of drug use; prevention of pregnancy/STD; and high expectations for academics and careers) in 3-6 month period with "tell it like it is" evaluation measure after each module - Incentives used to minimize dropouts (prizes from novelty items to scholarships)
Evaluation	
Evaluation Strategy	Pre and post test
Methodological Weaknesses	- No comparison groups - Chi-square differences pre and post test only on individual survey items and overall decision making responses - Weak discussion of methodology
Has report been peer-reviewed?	Don't know
Method Used	Chi square

Results Process Evaluations Associations Impacts	- Volunteers and community-based organizations can deliver program. - Volunteer trainers felt project worked, despite lack of parental participation. - Levels of information increased; significant changes in decision-making responses. - Anomaly: post-tests less likely to feel need to be respectful to adults, yet were more likely to listen to parents compared to peers. - Appropriate male/female roles in contraception seen as more shared at post-test
Special notes, comments	Affiliate members trained to implement project; volunteer trainers serving as role models and instilling values of service so some components of role modeling/big sister and volunteering programs here

Name of Program	Project Taking Charge
Reference/citation	S.R. Jorgensen, V. Potts, and B. Camp, 1993, "Project Taking Charge: Six-month follow-up of a pregnancy prevention program for early adolescents," *Family Relations,* 42: 401-406. S.R. Jorgensen, 1991, "Project Taking Charge: An evaluation of an adolescent pregnancy prevention program," *Family Relations,* 40: 373-380.
Sponsor	OAPP Grant to the American Home Economics Association
Description	
Location(s)	Wilmington, Delaware and West Point, Mississippi
Time Period of Evaluation	Fall, 1989
Sample Size and Populations Served	39 in Delaware (25 treatment, 14 comparison); 52 in Mississippi (27 treatment, 25 comparison); participants were students in 7th grade home-economics classes; low-income community with high rates of unemployment and teen pregnancy; overall, 46% male; treatment group nearly ten percent Hispanic, comparisons less than 3%. Treatment group 36.5% black, comparison group 51.3%. 48% of treatment group were white, 41% of comparison. Treatment group 21.2% live with mother only, comparison 7.7%.
Age/Grade of Target Population	7th grade; average age 14.4.
Goals of the Intervention Program	Helping young adolescents "take charge" of their psychosexual relationships/development and plan for future employment; increase parents' skills in assisting in these areas
Approach	- Abstinence based sex and vocational education program - Parent involvement, 3 evening parent-youth sessions - 6 week curriculum
Evaluation	
Evaluation Strategy	- Pre- and immediate post-tests and 6-month follow-up - Randomly assigned classrooms to treatment and comparison - Parents had telephone interviews at 2 sites and questionnaire at Ohio site. Standard OAPP questions used - Research instruments pilot tested in Washington, DC among low-income, inner-city adolescents in July 1989

Methodological Weaknesses	- Treatment and comparison groups varied considerably by race, ethnicity, and family structure; an artifact of using entire 7th grade classes as groups. - Really need larger samples to look at initiation of sexual activity, the area where abstinence approach should be most promising. - Always somewhat limited by self reports, and fear is that the abstinence approach biases respondents toward denial of sexual initiation. -Possible contamination between treatment and comparison groups since they're in same school
Has report been peer-reviewed?	Yes
Method Used	ANOVA, ANCOVA
Results Process Evaluations Associations Impact	**Pre-test/Post-test results:** - Cognitive gains among treatment group - No significant differences in self-reported sexual behavior, sexual communication between parent and adolescent, self esteem, sexual values or educational aspirations at post test - Significantly greater communication with fathers about vocational issues at post test - Found less sexual initiation among treatment, but not significant and only 6 weeks passed. **Follow-up:** - Cognitive differences held up. - Father communication effect disappeared - Less sexual initiation held up, but very small numbers--10 of 20 and 7 of 30. Still, this is in the right direction and it achieves statistical significance at p = .051.
Special notes, comments	

Name of Program	Quantum Opportunities Program
Reference/citation	A. Hahn, 1994. "Evaluation of the Quantum Opportunities Program (QOP): Did the Program Work?", Center for Human Resources, Brandeis University, Waltham, MA.
Sponsor	Ford Foundation
Description	
Location(s)	San Antonio, Philadelphia, Milwaukee, Saginaw and Oklahoma City
Time Period of Evaluation	1989-1993
Sample Size and Populations Served	N=216, population was low-income students in families receiving public assistance
Age/Grade of Target Population	Students entering the 9th grade
Goals of the Intervention Program	To test the ability of community-based organizations to "foster achievement of academic and social competence among high school students from families receiving public assistance".
Approach	The "quantum opportunities" offered included educational activities (e.g. tutoring, computer-based instruction), community service activities aimed at improving conditions in the communities, and development activities (e.g. arts, career, college planning). Students received small stipends each time they participated in approved services, and bonus payments were also given for completing segments of program activities. They also received matching funds in accrual accounts which could be used for an approved activity after high school. Stresses community, responsibility, opportunity and investment.
Evaluation	
Evaluation Strategy	In each site, 25 students were randomly assigned to an experimental group, and 25 randomly to a control group, from lists of 8th grade students from families receiving public assistance. A follow-up questionnaire was administered to experimental and control group members in the fall of 1993.

Methodological Weaknesses	**- Sample sizes are small for the within site comparisons that authors conduct, but sample size of 250 for overall comparisons should be sufficient.** **- Further, sample attrition was quite high in some sites, making the samples even smaller.** - There were large differences in the four sites. The Philadelphia site stood out in its ability to provide stable, consistent relationships between QOP youth and program staff. In contrast, two other sites came to a point where institutional ties and structural activities were minimal, and attendance had declined greatly.
Has report been peer-reviewed?	Yes, by 4 reviewers for the Ford Foundation
Method Used	Mean differences
Results Process Evaluations Associations Impact	- QOP members more likely to be high school graduates - QOP members more likely to be in post-secondary schools - QOP members less likely to be high school dropouts - QOP members less likely to have children during teen years - Analyses at the end of one year showed no differences between Es and Cs; after two years, E/C differences were found--evidence that longer term follow-up on intervention evaluations are warranted
Special notes, comments	- This program is not specifically a teen pregnancy prevention program. They did not measure sexual activity or pregnancy as outcomes. The finding that experimental group members are less likely to have children might be an indication of delayed sex, or pregnancy prevention, or it might indicate higher rates of abortion.

Name of Program	Reducing the Risk
Reference/citation	D. Kirby, R.P. Barth, N. Leland and J.V. Fetro, 1991, "Reducing the Risk: Impact of a new curriculum on sexual risk-taking," *Family Planning Perspectives, 23*(6): 253-263. R.P. Barth, N. Leland, D. Kirby, and J.V. Fetro, "Enhancing Social and Cognitive Skills," in B. Miller et al. (pp. 53-82) Program Summary
Sponsor	The Stewart Foundation, The William and Flora Hewlett Foundation and NIH Division of Research Resources
Description	
Location(s)	California, rural and urban (13 high schools, 10 school districts)
Time Period of Evaluation	1988-89 school year and 18-months after
Sample Size and Populations Served	758 in 23 classes completed 18-month follow-up questionnaire (pretest: 586 treatment group and 447 comparison group students); Sample includes both males and females; (20% Latino, 2% black in these classes, and 38% Catholic)
Age/Grade of Target Population	10th grade health education class (average age = 15)
Goals of the Intervention Program	- Prevent students from having pregnancy or unprotected sex, possibly by abstinence. - Increasing resistance to social pressures. - Increase parental discussions on abstinence, pregnancy, sexually transmitted disease (STDs).
Approach	- Abstinence, with social influence model (social learning theory and social inoculation theory) and cognitive-behavioral theory. - Explicit norms against unprotected sexual intercourse - 15-class period curriculum; 60-page workbook - 3 week intervention
Evaluation	
Evaluation Strategy	- Quasi-experimental: classes assigned to treatment or comparison - Questionnaires before/after program, 6 month and 18 month follow-ups

Methodological Weaknesses	- 27% attrition rate between pretest and 18-month survey--survey dropouts more male, older, lower grades, more sexually active - Some teachers taught both experimental and comparison classes - Fears that experimentals were dating comparisons - All students got some type of sex education - Small sample size for subgroup analyses
Has report been peer-reviewed?	Yes
Method Used	Chi-square (dichotomous) or t tests (interval-level) of significance; logistic regression analysis
Results Process Evaluations Associations Impacts	- Insignificant but wrong-direction results on pregnancy - More students in comparison group initiated sex within 18 mos; No association with race/ethnicity found - Low-risk youth (defined as: 2-parent / mom a high school graduate / grades >D / alcohol-free) and females were the 2 groups with positive effect from treatment group program on having protected intercourse - Students who were sexually inexperienced at pre-test were less likely than the comparison group to have unprotected intercourse - Latino students in treatment group more likely to discuss pregnancy with their parents.
Special notes, comments	- Again, it seems this approach is more effective with students who are not sexually involved before participating, or as here who are "low risk" -- screening for approach might be helpful. - Discussion of power analysis of findings at end of book chapter suggests need for larger sample size.

Name of Program	RESPECT
Reference/citation	Hughes, M.E., Furstenberg, F.F., Jr., and Teitler, J.O. 1995. "The impact of an increase in family planning services on the teenage population of Philadelphia." Family Planning Perspectives 27(2): 60-65, 78.
Time Period	Mid-1988 to 1991
Sponsor	William Penn Foundation and Robert Wood Johnson Foundation
Description	
Location(s)	Philadelphia, PA
Sample Size and Populations Served	- **Wave I (1988)**: 1,256 teenagers, and 966 parents from random sample in catchment areas offering RESPECT services and random city-wide sample; 18% of teens were the 2nd teen in a household (84% response rate); females oversampled 4 to 1 - **Wave II (1991)**: 1,181 teen interviews and 1,007 parent interviews; 20% were 2nd teenager in a household. (76% response rate) - 272 teens in the longitudinal panel were assigned randomly to a single survey round (one half were counted as respondents to Wave I and the other half to Wave II); total sample for analysis equals 1,961 teenagers.
Age/Grade	Teens aged 14-18
Goals of the Intervention	- To lower the barriers to contraceptive services for sexually active adolescents, thus raising the proportion of teen population served and thus lowering rates of pregnancy and childbearing - Initiate education outreach programs - Publicity campaign to increase awareness and knowledge of teen pregnancy and of local family planning resources; encourage responsible sexual decision-making; encourage postponement of sexual initiation; improve communication between schools and community resources; improve parent-teen communication
Approach	- Between January and August of 1988, 9 existing clinics increased services for teens or began serving teens for the first time, while 3 new clinics offering services to teens opened in communities where there had previously been no clinic. - Specific strategies included: initiating or expanding after-school or evening hours, beginning teen walk-in hours, decreasing waiting time for appointments, increasing the hours reserved for teens only; improving training of staff regarding special needs of teens; increasing staff - Outreach efforts were focused on sponsoring group educational sessions at community institutions for teens and their parents; many clinics also participated in events such as community health fairs; several clinics included peer education in their outreach. - Media campaign (theme, "Pregnancy: It's not for me") launched in Nov. 1989; over the next 2 years posters and public transit cards with slogan and featuring local teenagers were distributed; was the subject of many radio program and several newspaper articles.
Method	- Logistic regression on pooled sample controlling for age, race and gender; indicators of wave and area

Evaluation	
Evaluation Strategy	- Random samples of teens in 5 catchment areas (census tracts where 9 RESPECT agencies were located; 4 of the areas contained more than one clinic); one suburb contiguous to Philadelphia, 4 within city limits; randomly sampled tracts within each catchment area, then drew a random sample of blocks within these tracts, and using a reverse telephone directory compiled a list of phone numbers corresponding with non-commercial addresses in selected blocks. - Random samples of teenagers from the entire city for comparison; randomly selected columns from the reverse-listing directory, excluding those columns that had already been used to create the catchment sample. - Telephone screening for teens aged 14-18 in households; recruited 4 times as many females as males. - Interviews with teens in cross-sectional samples prior to implementation of services and 2.5 years later. - In Wave I respondents were interviewed immediately after they were deemed eligible; in Wave II full sample was recruited before the interview phase was initiated (average 7 months elapsed between recruitment and interview) - Compared change over time among those in the catchment areas to those observed in the entire city.
Methodological Weaknesses	- First city wide sample was quite small compared with other subsample, due to cost constraints; power analyses showed small sample size limited the ability to discern differences between the samples over time. Only become significant if the effect is large. - Whole city exposed to media campaign, therefore don't have any comparison group with which to compare effects - There is a confound of three components of the project: increased clinic services, outreach, and media campaign; Difficult to untangle possible effects of these. - They encounter the difficulties evaluating any media campaign, e.g. hard to separate out effects of other media events, campaigns and on-going public debates. - Also, though the clinics were located in catchment areas, teens outside area might come to clinics, and teens inside these areas might go elsewhere.
Peer-reviewed?	Yes

Results Process Evaluations Associations Impacts	- Teens in both samples were more likely to have heard of a family planning clinic in Wave II than Wave I, but increase was smaller in catchment area than entire city (not statistically significant--N.S.) - % of teens who had ever been to a clinic declined in the catchment area sample, while the city-wide sample remained the same (N.S.) - No change in frequency of visits, satisfaction with clinics, plans to return to clinic, % reporting negative attitudes about clinics over time or between samples. - Increase in % of teens who believed that clinics should be located in schools in the catchment area (N.S.) But significant decline in the city-wide sample. - % of teens who know that clinics provide free contraceptives also increased greatly over time in both catchment area (73% to 86%) and city (70% to 82%) (N.S.) - Significant change in knowledge that a physical exam is required to obtain a contraceptive method in entire city; catchment area same - No change over time in proportion of teens who said they had ever had sex - Among those who had ever had sex, % who reported having sex in past 4 weeks declined in both areas. (N.S.) - Large declines in both samples in % of teens who agreed that teens would be better off abstaining from sex and that abstinent teens would be ridiculed by their peers. (N.S.) - Increase in % who used method at 1st intercourse (stronger in catchment areas); % who used method at last intercourse increased in catchment area and decreased in city sample; % who used method at each intercourse in last 4 weeks declined 1 point in catchment area (61% to 60%) but declined from 83% to 61% in city. (NONE of these are statistically significant) - Decline in belief that pill has harmful side effects (only significant among city); in city significantly more teens said birth control often doesn't work even if you are careful (in catchment proportion decreased but N.S.). - In city sample, % who said would only have sex if using birth control declined significantly from 86% to 68%; in catchment same - Among females: no discernible effect of teen pregnancy or births. - Re-estimated controlling for mother's age at first birth and mother's marital status and results were substantively the same. - Analyses demonstrated no clinic-specific pattern of change over time that departed from that observed in the full sample.
Special notes, comments	- Response rates calculated as the ratio of the # of households with at least 1 person interviewed to the # of eligible households in the initial screening; true response rates are slightly overestimated, since approximately 6% of households refused screening in both waves and in several instances only some of the eligible household members were interviewed. - To check for bias of selecting a phone-based sample: compared characteristics of mothers interviewed in city-wide samples with those of Philadelphia County mothers of 14-17 year olds in the 1990 Census 5% PUMS. No differences between survey and census. - Did not detect the desired influence of the RESPECT project on clinic use in the target population; if anything, results suggest the opposite. Results do not support any sustained effect from the project.

Name of Program	School-Based Clinics
Reference/citation	D. Kirby, C. Waszak, & J. Ziegler, 1991, "Six School-Based Clinics: Their Reproductive Health Services and Impact on Sexual Behavior," *Family Planning Perspectives*, 23: 6-16.
Sponsor	Ford Foundation, William T. Grant Foundation, & Charles Stewart Mott Foundation
Description	
Location(s)	Gary, IN; San Francisco, CA; Muskegon, MI; Jackson, MI; Quincy, FL; and Dallas, TX
Time Period of Evaluation	1985-1987
Sample Size and Populations Served	Gary (558 M, 720 F); San Francisco (589 M, 615 F); Muskegon (596 M, 729 F); Jackson (353 M, 458 F); Quincy (538 M, 624 F); Dallas (595 M, 658 F) for survey data
Age/Grade of Target Population	High school students
Goals of the Intervention	Preventing unprotected sex
Approach	School health clinic (with varied services)
Evaluation	
Evaluation Strategy	- Data from clinic records and student health survey - Pre and Post test design - Comparison group (school of similar social and demographic characteristics) for 4 schools; cross-section only available to Quincy and San Francisco
Methodological Weaknesses	- Comparison-group problems - Don't show pre and post tests for groups with comparison schools, only show post-test. - Self-selection problems - Response rates tricky (claim >90% attending school and with permission) - AIDS became salient issue during evaluation period (with concomitant nationwide increase in condom use)
Has report been peer-reviewed?	Yes
Method Used	Percentages, unstandardized regression coefficients, significance via "change in F" test, Chi-square

Results Process Evaluations Associations Impacts	- Presence of clinics did not hasten onset or increase frequency of intercourse - Muskegon only site with significant differences between clinic/comparison on all 3 measures of contraceptive use (with clinic more likely to use contraceptives than comparison), but not sure just why this was so - Providing contraceptives didn't significantly increase their use. - No evidence that school-wide pregnancy rate was reduced.
Comments/Notes	- Noted that teens were more likely to continue use of oral contraceptives when clinic required follow-up appointments

Name of Program	School/Community Program for Sexual Risk Reduction Among Teens
Reference/citation	H.P. Koo, G. H. Dunteman, C. George, Y. Green & M. Vincent, 1994. "Reducing adolescent pregnancy through a school- and community-based intervention: Denmark, South Carolina, revisited," *Family Planning Perspectives,* 26: 206-211, 217. H.P. Koo, G.H. Dunteman, H. Gogan, J. Johnson, A. Spruyt, N. Rizzo, B. Braddy, R. White, and T.J. Cook 1990, "Reanalysis of changes in teenage pregnancy rates in Denmark area and comparison counties", report submitted to the Centers for Disease Control.
Sponsor	Centers for Disease Control; Office of Adolescent Pregnancy Programs; School of Public Health, Universify of South Carolina
Description	
Location(s)	Denmark, (Bamberg County) South Carolina and 6 comparison counties
Time Period of Evaluation	Intervention occurred in 1983; pregnancy rates were assessed prior to intervention, in 1981-1982, and post-intervention in 1984-1988.
Sample Size and Populations Served	- Rural, low-income, undereducated females, 58% black, 42% white - In 1983: Intervention portion of target county (n=292); comparison portion of target county (n= 358); contiguous counties (n= 680, 2,880, and 630); and noncontiguous counties (n= 940, 740, and 1,200).
Age/Grade of Target Population	14-17 year old girls (high school age)
Goals of the Intervention Program	**Outcome objective**: Reduce occurrence of unintended, out-of-wedlock teen/pre-teen pregnancies over time; **Primary behavioral objective**: Postpone sexual initiation among never-married teens/preteens; **Secondary behavioral objective**: Promote consistent use of effective contraception among never married teens/preteens who are sexually active and do not desire pregnancy through education and provision of contraceptives; **Educational objective**: Promote the postponement of sexual initiation as the "positive, preferred sexual and health decision". **Five subcomponents of educational objective**: 1) improve decision-making skills; 2) improve interpersonal communication skills; 3) enhance self-esteem; 4) "align personal values with those of the family, church, and community; and 5) increase knowledge about sexuality issues (e.g. reproductive anatomy, physiology, contraception).

Approach	- Intensive, comprehensive community-wide educational program - Uses social learning theory and diffusion theory - Start by educating the adults in the community; teachers are trained with graduate level courses; they then implement sex education in all grades using an integrated curriculum approach. That is, instead of having a sex education class, teachers integrate issues of sex/sexuality/contraception etc. into appropriate subjects (e.g. biology, social studies). - Church leaders, clergy, and parents are recruited for "mini-courses" (topics based on the five educational objectives) to improve their skills as parents and role models. - Provision of family planning services and supplies
Evaluation	
Evaluation Strategy	The average estimated pregnancy rate (EPR) for the pre-intervention period (81-82) is compared with the average EPR for two post-intervention periods (84-86, and 87-88), and the changes from pre to post are compared across areas. The average EPR was calculated as the sum of the annual EPRs for the periods, divided by the # of years in the period. They added 18 year olds' abortions and births that were conceived while they were age 17. Abortions were based on reported abortion rates. Miscarriages were not included as there were too few to adjust for. The variances of the average EPRs were computed (assuming the annual number of vital events in each area to be binomially distributed), and significance of differences in the changed average EPR was assessed using Z statistics, adjusted to take into account the lack of independence among EPRs between years.
Methodological Weaknesses	- The stability of pregnancy rates is questionable when the denominator is less than 1000; so the results may be related to sample size. - Possible bias may be introduced if quality of abortion data was different in different counties. - Cannot disentangle components of program
Has report been peer-reviewed?	Yes
Method Used	Comparison counties selected using principal components analysis to match on pre-program EPRs as well as SES characteristics; comparisons of pregnancy rates, using Z scores adjusted for non-independence; telephone interviews of 70 people in comparison counties for insights into similar programs in their counties, interviews and discussions with program participants; correlations of pregnancy rates and family planning clinic utilization by 14-17 females in intervention compared to comparison counties.
Results Associations Impacts	- The adolescent pregnancy rate in the intervention area significantly decreased from an annual average of 77 pregnancies per 1,000 women aged 14-17 during the preprogram period (81-82) to 37 per 1,000 following the intervention (84-86), and returned to a higher level (66 per 1,000) in 1987-88 after the discontinuation of important program components.

Special notes, comments	- This is a reevaluation of a program originally evaluated in 1987, and reported in: M.L. Vincent, A.F. Clearie, M.D. Schluchter, 1987. "Reducing adolescent pregnancy through school and community-based education," *Journal of American Medical Association,* 257: 3382-3386. The original evaluation did not consider provision of contraceptive services and supplies in their evaluation. The reevaluation was conducted in order to incorporate these portions of the intervention, and to improve upon the selection of comparison counties. They also extended the period of the evaluation. Third, they recalculated pregnancy rates after adding live births and induced abortions among 18-year olds who conceived when they were 17. -Through the reevaluation process, the researchers found that the school nurse played a large part in the impact of the intervention through provision of condoms and other family planning services. - Although there is no way to know for sure if the resulting decrease in EPR in the intervention area is actually a result of the intervention, or some other phenomenon such as a similar program in comparison counties, the evaluators addressed this issue by conducting telephone interviews of 70 people in the comparison counties. They found there were programs that had been initiated or discontinued in the comparison counties during the study period that may have affected pregnancy rates. They also noted that neither the target nor the comparison counties changed over time sociodemographically. Also, there was no substantiation that the intervention efforts increased other health efforts or activities in the target community. - There was some loss of momentum of the program over time

Name of Program	**Self Center Program**
Reference(s)/ Citation(s)	Zabin, L. "School-linked reproductive health services: The Johns Hopkins Program", in B. Miller, J. Card, R. Paikoff, & J. Peterson (eds.), *Preventing Adolescent Pregnancy,* (pp. 156-184), Newbury Park, CA: Sage Publications. Zabin, L., Hirsch, M.B., Streett, R., Emerson, M.R., Smith, M., Hardy, J.B., & King, T.M. (1988). "The Baltimore pregnancy prevention program for urban teenagers: How did it work?", *Family Planning Perspectives*, 20(4): 182-187. Zabin, L., Hirsch, M.B., Smith, E.A., Streett, R., & M., Hardy, J. (1986). "Evaluation of a pregnancy prevention program for urban teenagers", *Family Planning Perspectives*, 18(3): 199-126.
Sponsorship	The Educational Foundation of America; the Ford Foundation; the Grant Foundation
Description	
Location(s)	2 junior high schools and 2 senior high schools in Baltimore, MD (one each=program, one each=control)
Time Period of Evaluation	Fall 1981 to Spring 1984
Sample Size and Populations Served	- Experimental: Round 1 (baseline): 667 males, 1033 females; Round 2 (final): 506 males, 695 females; all black schools, lower socioeconomic status. - Comparison, Round 1: 944 males, 1002 females; Round 2: 860 males, 889 females; black students from racially mixed schools, similar socioeconomic status as experimental schools (all students in the racially mixed schools were administered the questionnaire, but the analysis was restricted to blacks for purposes of comparison. - All eligible students in the school were administered the questionnaire, with a 98% response rate.
Age/Grade of Target Population	7th and 8th grades--Junior high school 9th through 12th--Senior high school
Goals of the Intervention Program	- Reduce the rate of unintended pregnancy in an urban school setting through education, counseling and medical services. - Document the success or failure through rigorous process and summative evaluation.
Approach	- Case-management approach; emphasis upon small group work; interactive rather than didactic modalities of education were employed - School based clinic: Social worker and nurse/midwife in each experimental school and 12 students served as peer resources. Makes presentation in homeroom once a semester and is available every day for several hours for individual or group counseling. - Off-site clinic (from Jan. 1982) open in afternoons offers discussion groups, counseling, education, and reproductive health care. All services were free.

Evaluation	
Evaluation Strategy	- Pretest/posttest and experimental/comparison model design (quasi-experimental). - Repeated cross-sectional data, respondents not linked across time periods. - Self-administered questionnaires before program started and each spring for 3 years for experimental and for comparisons at the beginning and end of the evaluation period.
Analytic Strategy/ Statistical Methods	Bivariate analyses controlling for grade and exposure; life tables of age at first sex, number of months following first coitus until clinic visit, and proportion pregnant.
Methodological Weaknesses	- Movement in and out of schools meant that by the end there was a lot of attrition (Experimental: 507 male and 695 female left and Comparison: 860 male and 889 female). Lower attendance in spring than fall also contributes to the smaller sample. Absenteeism and premature dropping out are not random. - Inability to measure before and after at same time of year (baseline in fall and 1st follow-up in spring) results in different age distributions. They addressed this by controlling for grade; used life tables when appropriate; and length of exposure to program is controlled for. - Can't pinpoint which part of the program led to its success - Pre-test/post-test design would be better if longitudinal instead of cross-sectional (although this is difficult with a 3-year follow-up of school youth, and impossible above 9th grade). The strength, on the other hand, of the cross-sectional design is that it guarantees anonymity to the teens. - Truant teens are most likely not included, so some selectivity is involved--truants might be the least likely to have used/been affected by the services
Has report been peer-reviewed?	Yes

Results Process Evaluations Associations Impacts	- About 85 percent of students had contact with at least one component of the program. Small group discussions were the most popular. **Impacts:** - Significant increase in knowledge of correct use of contraceptives over program period for males and females in experimental school; no significant changes in comparisons - Females in experimental significantly more likely to identify the correct period of risk of pregnancy. No difference for males or comparisons. - Significant decrease for both sexes in % saying withdrawal or douching are good contraceptive among experimental, not comparison. - Positive support for teen childbearing declines only among girls. Slight and inconsistent changes in perceived ideal age to marry and have children, and when sexual relationship are okay. - Some postponement of initiation of sex for those with 3 yrs exposure. 2/3 more had become active by age 14 at the beginning than end. - Life table curves show a median of approximately 7 month postponement of age of sexual initiation among those exposed to full length of program, smaller delays for those exposed to shorter portion of program - Significant increase on attendance at birth control clinic for experimentals but not comparisons - In nearly all program school sub-groups, fewer than 20% of female students exposed to program for at least 2 years had unprotected sex (no contraceptive) at most recent sex; comparison schools did not show this change - After 1 year exposure, significantly higher % attended clinic before initiation or sooner after initiation. - Significant increase in pill use and use of method requiring advance preparation. - Rate of pregnancy went up at 16 months exposure (13% for experimental group and 50% for comparison), and went down for experimentals at 20 months and 28 months (-22.5% and -30.1%) and went up for comparisons (39.5% and 57.6%). Abortion rates were the main reason, but over time, the drop in pregnancy rates reflect both increased abortion and decreased childbearing overall; also found reductions in frequency of sex in program schools, which they found (using some statistical models not specified) to be a key factor in declining pregnancy rates. - Also did program utilization and cost analyses; looked at number of contacts students had with clinic staff, and at school contacts vs. contacts in the clinic linked to the school. One key question was whether the school served as a bridge to the clinic; they found that it did. Cost analysis found the average cost of program per student was $122.
Special Comments/Notes	- Education and services need to be delivered in same location; best to be delivered by a multidisciplinary staff. - In calculating pregnancy rates, since girls who were pregnant were likely to be transferred to special schools this was ascertained and accounted for. - It seems that having comparisons from racially mixed schools and experimental from all black schools complicates the issue of potential partner availability. - Author suggests that small group sessions are very effective, have low cost, permit a small staff to reach large numbers of students, and are popular in both school and clinic settings.

Name of Program	Sex Respect
Reference/citation	J.A. Olsen, S.E. Weed, G.M. Ritz, and L.C. Jensen, 1991, "The effects of three abstinence sex education programs on student attitudes toward sexual activity," *Adolescence, 26*, 103: 631-641.
Sponsor	OAPP, Utah State Office of Education, & private corporations
Description	
Location(s)	Utah; suburban school district population composed of a junior and a senior high school
Time Period of Evaluation	1988-1989 school year
Sample Size and Populations Served	Utah junior and senior high school students in a required health class in a suburban school district; do not report sample size
Age/Grade of Target Population	7th and 10th grades (some 11th and 12th graders in one district)
Goals of the Intervention Program	- Improve awareness and recognition of harmful consequences of early sexual activity - Increase adherence to attitudes and values supporting abstinence - Increase willingness and motivation of teens to delay or avoid early sexual activity - Improve skills which help teens resist pressure to be sexually involved - Increase moral and social support from peers, family and community - Create a counter-peer pressure on behalf of self-restraint by helping students internalize cogent reasons for restraint and abstinence - Infuse the regular health education programs with a greater emphasis on saying "no" to risk and potentially harmful behaviors - Broadly disseminate information promoting sex respect and sexual self-restraint - Increase parental involvement and the level of interaction between parents and teens concerning the value of abstinence
Approach	- Sex education that promotes abstinence through the concept of respect for one's self and for others - Focusses on teen sexuality, dating and peer pressure - Syllabus is provided for the teacher, a textbook for the student, and a guidebook for the family - Utilizes cartoons to convey messages - 12 minute videotape introduction states philosophy and need for chastity education from a public health perspective - Two 30-minute videotape segments of the "Chastity Challenge" (developer speaking from a Judeo-Christian perspective) - 10 unit program - Parental permission for participation

Evaluation	
Evaluation Strategy	- Pre-test at beginning of the semester in which program presented; post-test at the conclusion of the program - Survey regarding attitudes toward premarital sex administered before and after the program - Two sexual behavior questions: Ever had sex? In last 4 weeks?
Methodological Weaknesses	- No comparison groups without sex education. - No long-term follow-up. - Non-representative sample-- Utah only.
Has report been peer-reviewed?	Yes
Method Used	4-way Analysis of Variance of test score, program, grade level and gender; Pearson correlation coefficient between sexual behavior and sexual attitude computed (-.548)
Results Process Evaluations Associations Impacts	- Overall, females were more likely to have negative views toward premarital sex than males. - Increase in negative views toward pre-marital sex among both sexes from pre to post test. Don't report significance level - Created a 3-point ordinal measure of sexual activity (1=Never had sex, 2=Had sex in past, 3=Had sex recently): this was negatively correlated with attitudes toward pre-marital sex. (If the behavior is prior to the program, the program can't affect the behavior)
Special notes, comments	- Article also assessed the Teen Aid Program and Values and Choices program and found Sex Respect appeared to have the most effect.

Name of Program	Smart START
Reference/citation	K.A. Armstrong and M.A. Stover, *Smart Start: An option for adolescents to delay the pelvic exam and blood work in family planning clinics*. Research Department, Family Planning Council of Southeastern PA. Donovan, P. (1992). "Delaying pelvic exams to encourage contraceptive use". *Family Planning Perspectives, 24*(3): 136, 144.
Sponsor	William Penn Foundation and Department of Human Services
Description	
Location(s)	Southeastern Pennsylvania
Time Period of Evaluation	October 1989 to March 1991
Sample Size and Populations Served	All consenting, non-pregnant teens under age 18 who initiated family planning services at any of the 3 clinics were eligible. All teens enrolled in Smart START were asked to complete survey. Follow-up survey (8 months later) was conducted with 197 of the 390 teens who completed the baseline survey. Medical charts were collected for 151 of the 197 and this subset was used in analyses.
Age/Grade of Target Population	11-17, average almost 16.
Goals of the Intervention Program	Encourage earlier use of family planning services and effective birth control for teens by removing barriers (pelvic exams and blood drawing) which might frighten teens away, and to encourage teens to use birth control sooner and more consistently
Approach	- Offered the option to delay the pelvic examination and/or blood work while receiving two 3-month supplies of oral contraceptives (1st given at initial visit and 2nd at 3 month visit). Comprehensive family, social, and medical history was taken at initial visit as well as basic medical services (including a pregnancy test). Staff did not offer delay if interview suggested it was not a good idea. Detailed medical services were required to be completed withing six months. - All teens, regardless of decision to delay any medical procedure, were provided with counseling and education and given an easy-to-read birth control methods brochure. With the aid of counselor, teen selected a method. - Telephone follow-up 5 to 10 days after initial clinic visit and anther shortly before return appointment. During calls, counselor answered questions and discussed problems the teen was having with her method, as well as any other issues raised.
Evaluation	
Evaluation Strategy	- Self-administered questionnaire at first clinic visit; follow-up 8 months later with ½ of them (telephone); medical charts used. - Comparison of those who delayed elements of physical exam with those who did not.

Methodological Weaknesses	- Totally individual choice (not random assignment) regarding going to a clinic and then choosing whether to get a pelvic exam or blood tests (with oral contraceptives). - Short-term follow-up.
Has report been peer-reviewed?	No
Method Used	Tabulations with Chi-square statistics
Results Process Evaluations Associations Impacts	- Blood work chosen for delay more frequently than researchers expected (26% chose to delay pelvic, about 40% delayed blood tests), particularly among African American teens. - Teens who opted to delay the pelvic exam had waited longer after first sex to seek family planning services than those who did not delay pelvic exam, but not statistically significant. However, teens who delayed the blood work were more likely to access family planning services prior to first sex than those who did not delay. - No differences reported between 2 groups in use of contraceptives at first sex. - No association found between delay and STDs. - Most sexually active teens used pill regardless of delay status; however, those who delayed pelvic exam were twice as likely to use condoms (can use 2 methods) as those who did not delay. - Those who delayed pelvic exam were more consistent users of condoms, but those who did not delay were more consistent users of non-condom methods. - Delayers were less likely to be pregnant 8 months after initial visit, not statistically significant difference.
Special notes, comments	- Exploratory study and by design did not randomly assign teens to delay or no delay. In this alternative service delivery model, clinicians were allowed to make judgments to offer teen option to delay. The extent that these judgments were made was not monitored. - Very atypical kind of intervention. - Even though the goal was to attract teens to the clinic by eliminating a possible barrier to seeking care, they did not have a publicity or outreach component to this project. They relied completely on word-of-mouth for at least halfway through the program, and then very limited outreach efforts.

Name of Program	St. Paul Maternal and Infant Care Project
Reference/citation	Kirby, D., Resnick, M.D., Downes, B., Kocher, T., Gunderson, P., Potthoff, S., Zelterman, D. and Blum, R.W. (1993). The effects of school-based health clinics in St. Paul on school-wide birthrates. *Family Planning Perspectives,* 25(1):12-16.
Time Period of Evaluation	1970 to 1987
Sponsor	Not Stated
Description	
Location(s)	Mechanic Arts H.S. (Clinic opened in 1973); Washington/Como H.S. (Clinic opened in 1976); Central H.S. (Opened in 1976); Humboldt H.S. (Opened in 1981), and Johnson H.S. (Opened in 1981) in St. Paul, MN
Sample Size and Populations Served	Female high school students (Asians were excluded due to large influx in population with differing cultural patterns of childbearing)
Age/Grade of Target Population	9th thru 12th grade in Mechanic and 10th through 12th for all others
Goals of the Intervention	Provide basic health care and reduce pregnancy and birth rates
Approach	School based clinic--education, decision making counseling, physical examinations related to birth control, prescriptions for birth control methods (filled free of charge), and pregnancy testing. Supplemented by sexuality education in the classroom.
Evaluation	
Method	- Calculated birthrates for a 16 year period, from the 1970-71 school year to 1986-87, using all female students in attendance during the relevant years as the denominator and only those female students whose name could be matched with county birth certificates in the numerator. - Because of a large influx of Asian immigrants they were excluded from the population
Evaluation Strategy	- Compared school wide birthrates over time (before and after clinic opened) - Used birth records
Methodological Weaknesses	- No real control for other environmental factors which may have influenced birth rates.

Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- Large fluctuations in birth rates from year to year and large increase in birthrates at one school did not necessarily parallel similar changes in other schools in the same year. - Mechanic H.S. had an initial decrease (before the clinic really could be expected to have an effect), followed by an increase in the next 2 school years. The school then closed in 1976, so it is impossible to say what effect, if any, the clinic actually had. - Central H.S.: Birth rates were fairly stable for the 5 years following the opening of the clinic. - Washington/Como: Decreased substantially 2 and 3 years after clinic opened, but had also been low 2 and 3 years before the clinic was open. - Humboldt: Birthrates increased in the several years following the opening of the clinic, but were not substantially higher than the preceding 5 or 6 years. - Johnson: Rates increased and remained higher than before the clinic opened. - Weighted birthrates comparing years before with years after show that Central, Washington and Humboldt schools were unchanged, Mechanic Arts decreased significantly and Johnson increased significantly. - Used logistic regression to control statistically for individual school, school size, and the proportion of students who were minorities, and found no association between clinic presence and birthrate. Analyses separately by race were not significant either.
Special notes, comments	- There were wide fluctuations in birthrates from year to year, so general trends should be observed and individual year to year fluctuations should not be given undue emphasis. - Could be that birthrates would have increased more had there not been the clinic, but it doesn't seem likely since birth rates in Minnesota declined during this period. - Clinics did not dispense contraceptives on site and did not refer students for abortions. - Year to year fluctuations may have obscured a small effect of the clinic, and since the birth rates are for the whole school, not just females who used the clinic, this may obscure the effect. - There is heated debate about whether or not these clinics had an effect - Earlier evaluation done in 1979 (see review of Edwards, et al., 1980)

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Name of Program	St. Paul Maternal and Infant Care Project
Reference/citation	Edwards, L.E., Steinman, M.E., Arnold, K.A., and Hakanson, C.Y. 1980. "Adolescent pregnancy prevention services in high school clinics." *Family Planning Perspectives*, 12(1) :6-14.
Time Period of Evaluation	April 1973 to May 1979
Sponsor	Not stated
Description	
Location(s)	St. Paul, MN
Sample Size and Populations Served	403 students received initial family planning services. All students who obtained contraceptive services were followed. In 1976, 748 students received services and by 1978-79, 1,465 students were utilizing services in the 2 senior high school project clinics. They were compared to 1,762 adolescents who received services during the same period in the hospital based clinic (MIC). Records of 85 pregnant students who delivered at St. Paul-Ramey Medical Center were reviewed retrospectively.
Age/Grade of Target Population	Junior high/Senior high school, aged 13-19
Goals of the Intervention	Provide basic health care and reduce pregnancy and birth rates
Approach	- School health clinic opened in 1973 and the school closed in 1975 - Family planning nurse practitioner is the team leader. - Give referrals to birth control clinic. - Day care center in the school.
Evaluation	
Method	Measure change in fertility rates
Evaluation Strategy	- Compared school clinic population with hospital clinic population; no control group - Medical records data
Methodological Weaknesses	- Not a great evaluation, changes in fertility and pregnancy rates are not compared to MIC, group so there is no control from other factors which may have influenced it.

Has report been peer-reviewed?	yes
Results Process Evaluations Associations Impacts	- At close of school the clinic was being used by two-thirds of the 12th grade students and 90% of the pregnant students. Fertility rates among female students fell by 56% between 1973 and 1976. Clinics were opened in the schools which students were transferred to. - School dropout rate after delivery was reduced from 45% in 1973 to 10% in 1976. No repeat pregnancies occurred among those students who delivered and returned to school. - School clinic patients had a lower incidence of obstetric problems and better outcomes for their infants than matched adolescents in the nonschool MIC prenatal clinic. - Contraceptive continuation rates were somewhat higher at the school clinic than the MIC clinic. - Between 1976 and 1979, the number of pregnancies and birth rates dropped in the 2 project high schools, but not by as much as in the initial school (1973 to 1976).
Special notes, comments	- Seems that school clinic population was higher risk to begin with: greater proportion had ever been pregnant, greater proportion of minorities. - Revisited by Kirby later (see previous review)--re-analysis indicates intervention had no effect.

Name of Program	Stay SMART
Reference/citation	St. Pierre, Mark, Kaltreider, and Aikin. 1995. "A 27-month evaluation of a sex prevention program in Boys and Girls Clubs across the nation." *Family Relations*, 44: 69-77.
Time Period of Evaluation	February 1988 - May 1990
Sponsor	Evaluation funded by Office for Substance Abuse Prevention
Description	
Location(s)	14 Boys and Girls Clubs across the nation
Sample Size and Populations Served	24 youths at each of 10 Clubs for intervention groups and 30 youths in each of 4 clubs for comparisons in disadvantaged, high crime areas participated, but only 152 (85 virgins and 67 nonvirgins) were tested in all follow-ups.
Age/Grade of Target Population	13 year olds
Goals of the Intervention	Aims to prevent/reduce sexual activity, cigarette smoking, alcohol use, and marijuana use among youth.
Approach	- Employs a postponement approach to sexual activity. Abstinence-only program containing no contraceptive information or services. - Has a multi-behavior focus: also smoking, drinking, and marijuana use. - Led by adult Boys and Girls Club staff members. - 12 sessions (adapted from Life Skills Training program and additional topics designed by the Club). - 2 year booster program is peer leader program; 5 small group sessions in 1st year; 1 session video format with discussion in year 2.
Evaluation	
Method	ANOVA
Evaluation Strategy	- Pretest-posttest non-equivalent groups design with multiple posttests over 27 months (3 month, 15 month, 27 month) - 5 clubs with just Stay SMART; 5 clubs with additional booster program; 4 comparison groups with no program - Self-report questionnaire

Methodological Weaknesses	- Voluntary participation, only those who attended 9 of 12 sessions were posttested for posttests at 15 and 27 months. - Only 53 youths in comparison group were tested (of a possible 120?)--can't figure out why. - High attrition (only approximately 40% retention). - Small N once they divide into subgroups.
Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- Check for Attrition differences: Among nonvirgins at pretest, those in booster group tended to be younger than the comparison group and slightly younger than the Stay SMART only group. Completion group in experimentals were primarily black whereas comparison group was racially mixed. - Sexual Attitudes scale (alpha=.87-.91) based on items like "being sexually active shows you are cool": Nonvirgins showed more positive attitudes toward sexual activity than virgins at pre-test. Nonvirgins in the Stay SMART-only group perceived significantly fewer benefits from engaging in sexual activity than the booster or the comparison group at all three posttests. No differences among virgins. - Sexual behavior (recency and frequency of sexual intercourse) index (r=.59-.84): no differences at 3 month posttest; Stay SMART nonvirgins reported less sexual behavior than comparison group at 15 month posttest; and less than both comparison and boosters at 27 month posttest. No differences among those who were virgins at pre-test.
Special notes, comments	

Name of Program	STEP (Summer Training and Education Program)
Reference/citation	J. B. Grossman and C.L. Sipe. 1992. "Summer Training and Education Program (STEP): Report on long-term impacts", Philadelphia, PA: P/PV. C.L. Sipe, J. B. Grossman & J.A. Milliner. 1988. "Summer Training and Education Program (STEP): Report on the 1987 Experience", Philadelphia, PA: P/PV. Public/Private Ventures. 1995. Public/Private Ventures News. Newsletter 27 (Winter):6-7.
Sponsor	Public/Private Ventures (P/PV)
Description	
Location(s)	Boston, MA; Fresno and San Diego, CA; Portland, OR; and Seattle, WA
Time Period of Evaluation	1986-1990 or 1991
Sample Size and Populations Served	In each of the 5 sites, 3 cohorts of approximately 320 youth each participated in both the program and the research study (total of 4,800 youth) - Cohort I entered STEP in summer of 1986, with a follow-up interview during the Fall of 1987. - Cohort II (N=1,635) entered in summer of 1986 and returned for a 2nd summer of STEP in 1987 and tested for 15-month outcomes; at 4 ½ year follow-up 77% completed interview. - Cohort III (N=1,591) entered in summer of 1987 and tested for 1st summer outcomes; at 3 ½ year follow-up 85% were re-interviewed - Disadvantaged 14-15 year olds in program; ages 17-18 and 18-19 for follow-up studies.
Age/Grade of Target Population	14-15 year olds in summer job/class program over two summers (7 weeks each)
Goals of the Intervention Program	- Improve academic and life skills - Reduce occurrence of adolescent parenthood, decrease drop outs from high school, increase high school graduation rates, and improve early labor force experiences.
Approach	- Gets teens summer jobs (all paid minimum wage for all segments of program) - Life Skills and Opportunities (LSO) component: Classes on abstinence, contraception, decision-making, consequences, and responsible social and sexual attitudes and behaviors. - 2 summer curricula teach benefits of delaying sexual involvement, and consistent and effective use of contraception

Evaluation	
Evaluation Strategy	- Half the youth interested in participating were randomly assigned to the treatment group and offered STEP program services; the other half were assigned to the control group and guaranteed a Summer Youth Employment and Training Program job. (In San Diego and Seattle, control youth were offered a job for 2 summers; in the other sites, they were offered a job only for the 1st summer). - Baseline Metropolitan Achievement Test Survey Battery, intermediate level (incentives for correct answers) - Self-administered questionnaires on attitudes, knowledge, and behavior - School transcripts - Follow-up telephone interviews - Subgroup analyses
Methodological Weaknesses	- Controls not retested in second summer except in San Diego and Seattle, where they were offered work experience and thus could be conveniently tested. - Inconsistent results in some areas make phone/personal interview data suspect in sexual area.
Has report been peer-reviewed?	No
Method Used	Regression analysis; significance tests at .10 level
Results Process Evaluations Associations Impacts	- Cost: $1685 (1 summer of LSO & remedial education only $487 per enrollee in 1987). - Graduation not affected by STEP. - Standardized test performances not affected. - No effect on reported sexual behavior (initiation or level once initiated). - Contraceptive knowledge positively affected by STEP. - Reported contraceptive use inconclusive (Cohort II, treatment more likely to report contraceptive use than control; Cohort III, only Hispanic treatment youth were more likely than controls to use contraception). - No impact on pregnancy for group as a whole or any subgroup (or males' causing or females' becoming pregnant).
Special notes, comments	- Learning differences due to control group's forgetting; so value in reinforcing gains made during school year was powerfully demonstrated here. Whether lost-to-follow-up students would differ or whether any differences in truthfulness of answers is unknown. - In 1988, STEP began being replicated in other sites (150 communities now operate STEP). Two additional summer programs have been created: a 4 summer sequence for 14-18 year olds including a 2 summer program for 14-17 year olds that provides half-time work and half-time academic enrichment and life skills classes; Summer PECE (Practical Education for Citizenship and Employment) for older youth who work in small teams to do physical or human service work in their communities; and Summer Internships, preferably after 3 summers of STEP and Summer PECE, place young people individually with employers and gather them for weekly job related seminars.

Name of Program	Success Express (Maricopa County YWCA, Phoenix, AZ)
Reference/citation	F. S. Christopher and M.W. Roosa. 1990. "An evaluation of an adolescent pregnancy prevention program: Is "Just Say No" enough?" *Family Relations, 39*: 68-72.
Sponsor	OAPP via Adolescent Family Life Act of 1981 (demonstration project grant to Maricopa County YWCA)
Description	
Location(s)	8 sites, presumably in Phoenix, AZ area
Time Period of Evaluation	Not stated
Sample Size and Populations Served	191 participants; 129 comparisons; 61% female; 69% Hispanic, 21% African American; sites in poor neighborhoods--average percent of families below poverty level (census tract data): 26.4%
Age/Grade of Target Population	Mostly sixth or seventh grade; average age 12.8 years
Goals of the Intervention Program	Abstinence, delay of sexual intercourse (beliefs and attitudes, sex-related behavior assessments)
Approach	- Stresses abstinence beliefs and attitudes - In 5 schools it supplemented the health curriculum
Evaluation	
Evaluation Strategy	- Quasi-experimental, pretest-posttest comparison group with analysis of program dropouts; assessment of noncoital sexual behaviors - 6-week program included posttest in last session; therefore, only a little over a month of outcomes possible
Methodological Weaknesses	- All changes pretest to posttest had to be in a very short time period - Huge attrition (dropout of participants 41% of treatment and 30% of comparisons)
Has report been peer-reviewed?	Yes
Method Used	Analysis of Variance and repeated measures analysis of covariance tests; Chi-square analysis regarding dropouts

Results Process Evaluations Associations Impacts	- Found increase in reported precoital sexual activity among participants, particularly males - Dropouts reported much younger age expected to first have sex (15.5 vs. 19.5 for retainees)
Special notes, comments	- Abstinence programs probably require screening for appropriate participants--very selective dropout rate vis-a-vis expected age at first coital sexual activity. - Abstinence programs were associated with particular religious and political points of view. Researchers took a dim view of abstinence programs generally.

Name of Program	Success Express
Reference/citation	M.W. Roosa and F. S. Christopher. 1990. "Evaluation of an abstinence-only adolescent pregnancy prevention program: A replication," *Family Relations, 39*: 363-367. K.S. Thiel and D. McBride. 1992. "Comments on an evaluation of an abstinence-only adolescent pregnancy prevention program," *Family Relations, 41*: 465-467. M.W. Roosa and F. S. Christopher. 1992. "A response to Thiel and McBride: Scientific criticism or obscurantism?" *Family Relations, 41*: 468-469.
Sponsor	OAPP grant to Maricopa County YWCA
Description	
Location(s)	Phoenix, Arizona area
Time Period of Evaluation	1988-1989 school year
Sample Size and Populations Served	399 participants, 129 comparison adolescents; 57% female 53% 8th grade, 21% 6th grade, 16% 7th grade Hispanic predominantly (64%), Black = 15%, Non-Hispanic White= 12%, Native Americans =5%; health education classes in 5 schools
Age/Grade of Target Population	Middle school; average age = 13
Goals of the Intervention Program	Reduce premarital sexual activity among low-income inner city minority youth
Approach	Abstinence via 6-session program
Evaluation	
Evaluation Strategy	Quasi-experimental pretest/posttest comparison group design

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Methodological Weaknesses	- Considerable dropout (34% participants, 24% comparisons) - No random assignment (students or classes) to conditions - Differences found between treatment and comparison groups - Schools were recruited based on interest - Follow-up analysis thwarted by too little data collected (all data collected by schools themselves) - Short-term follow-up (6 weeks after pre-test)
Has report been peer-reviewed?	Yes, plus, authors got published feedback via Commentary section of October 1992 *Family Relations* from K.S. Thiel and D. McBride
Method Used	ANOVA: 1-way pretest comparing comparison and treatment group; 2-way on dropout status and group ANCOVA
Results Process Evaluations Associations Impacts	- Comparison males increased actual intercourse - Treatment males increased petting-type activities - Controls expect to have sex at an earlier age than participants
Peer reviewed?	Yes
Special notes, comments	-Authors make a political criticism of program type, creating concerns regarding impartiality - OPA continuing funding this demonstration project/ new independent evaluator studying with changes made to comparison-group design and increased retention efforts - Screening probably could help assess amenability to this kind of approach for individual students - Replication of earlier program (see review of Christopher and Roosa, October 1990)

Name of Program	Swiss STOP-AIDS Campaign
Reference/citation	Hauser, D. and Michaud, P.A. 1994. "Does a condom-promoting strategy (the Swiss STOP-AIDS Campaign) modify sexual behavior among adolescents?" Pediatrics, 93(4):580-585.
Time Period of Evaluation	1987-1990
Sponsor	Federal Office of Public Health, Switzerland
Description	
Location(s)	Campaign in Switzerland, evaluation in Canton of Vaud
Sample Size	Cross-sectional sample of 1,359 teens 16-19 year olds in 1986 and 817 in 1990. Comparable in terms of sex, age, profession, and location
Age/Grade	16 to 19 year olds apprentices (young people who, on leaving the school system, engage in professional activity 3 to 4 days a week).
Goals of the Intervention	- To measure sexual behavior changes (especially the use of condoms) among adolescents after 5 years of a population based AIDS prevention strategy at the national and regional level.
Approach	Started in 1985, includes a special bus--the STOP-AIDS BUS--that attends social events such as pop festivals or soccer games. It provides information on AIDS, STDs, and prevention methods, and condoms are distributed free of charge.
Evaluation	
Method	- Two comparative cross-sectional self-administered surveys conducted in 1987 and 1990. - Stratified, randomly chosen sample of classes from three professional centers. - All selected students answered the questionnaire.
Evaluation Strategy	Comparison of cross-sectional data measured before and after intervention
Methodological Weaknesses	- With no comparison group we don't know what changes were due to program and what were due to other environmental factors. - No control for cohort effects or anything else. - Non-representative sample (apprentices only).
Peer-reviewed?	Yes

Results Process Evaluations Associations	- No statistical difference in sexual activity between 1987 and 1990. - Significant increase in boys using contraception regularly (38% in 1987 to 54% in 1990), but not for girls (71% to 77%). - Among both sexes, but especially girls, using and purchasing condoms has increased.

Name of Program	Teen Choice
Reference/citation	J.W. Gibson, Executive Summary. Inwood Teen Choice. December 1987. J. Fallek, Inwood House Community Outreach Program: Teen Choice. Summary Report for Fall 1992-Spring 1993 school year.
Sponsor	William T. Grant Foundation; Columbia University-Inwood House research and demonstration project (Columbia U. School of Social Work)
Description	
Location(s)	New York City public schools
Time Period of Evaluation	1984-1987 (program apparently re-evaluated 1992-1993)
Sample Size and Populations Served	536 Teen Choice students; 122 comparison group school students; 77% female; half black, half Hispanic (with < 5% neither), only 36% living with both parents
Age/Grade of Target Population	12-21 (15.6 average age)
Goals of the Intervention Program	Focusses on primary prevention of adolescent pregnancy, enhancing self esteem and decision-making skills
Approach	- Small group discussions (about half co-ed, half single-sex) - Individual counseling - Classroom presentations - Includes information on birth control - 12-14 sessions over one semester (4 months)
Evaluation	
Evaluation Strategy	- Pre-and post-questionnaires on knowledge of contraception techniques - Participants (voluntary) were compared to a comparison group (school that did not have program)
Methodological Weaknesses	- Comparison group had "too few males for adequate comparison group" - Could not find and administer questionnaires to "significant number" of black teenagers - Comparing voluntary participants may be problematic because these might be a select group (with more motivation, for example). - Short-term program, not followed up long enough

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Has report been peer-reviewed?	No
Method Used	Comparison of percentages
Results Process Evaluations Associations Impacts	- Hispanic students had more changes in attitudes about birth control if they were in ethnically-mixed groups discussion groups rather than in totally Hispanic groups. - Males had the most changes in attitudes if they were in co-ed groups; females in all-female groups. - Participants were more likely to use birth control at follow-up, although the differences from pre to post were small.
Special notes, comments	Evaluators and program directors apparently the same people

Name of Program	Teen Initiative
Reference/citation	C. Tiller and S. Blanton, Lake Cumberland District Health Department, Somerset, KY, FY 1992-93.
Sponsor	? (Kentucky Health Dept.)
Description	
Location(s)	Started in 1988 in 4 counties (these counties are in evaluation); by 1993 expanded to all counties in Kentucky
Time Period of Evaluation	1989
Sample Size	132 pregnant teens
Age/Grade	17 and younger
Goals of the Intervention	Prevent subsequent teen births and improve teen birth outcomes
Approach	Support services for pregnant teens to get them to delay further childbearing, including home assessment by social worker or nurse and monthly postpartum home visits for first year; toll-free phone number
Evaluation	
Evaluation Strategy	Comparison of program participants with state of Kentucky regarding repeat pregnancies
Methodological Weaknesses	- Program vs. entire state is a part/whole comparison, i.e., program participants are included in both program rates and the comparison rates.
Has report been peer-reviewed?	No
Method Used	Bivariate tabulations, Percent comparisons
Results Process Evaluations Associations Impacts	Comparisons of percentages of repeat pregnancies seem not meaningful; they do show large differences (but comparison is not defined other than "state")
Special notes, comments	Advantage of dealing with pregnant teens: providers know they've been sexually active; obvious disadvantages: prevention of first birth would be preferable, as these are all mothers aged 17 or younger.

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Name of Program	Teen Outreach Program
Reference/citation	Allen, J.P., Philliber, S., and Hoggson, N. 1990. "School-based prevention of teen-age pregnancy and school dropout: Process evaluation of the national replication of the Teen Outreach Program." *American Journal of Community Psychology, 18*: 4. Philliber and Allen: Life Options and Community Service: Teen Outreach Program. Chapter 6 in Miller, et al., 1992.
Sponsor	Association of Junior Leagues and American Association of School Administrators (grants from Charles Stewart Mott Foundation and Lila Wallace Reader's Digest Fund & other sources)
Description	
Location(s)	Nationwide, began in 1978 in 35 sites at 30 schools
Time Period of Evaluation	Evaluation 1986-1987 (academic year); Philliber and Allen in later evaluation examined program for five years and looked at 1988-89 (which had random assignment component)
Sample Size and Populations Served	- 632 participants; 855 comparisons; in 1986-1987 there were school students in 30 schools in 15 cities in the nation: ½ white, 1/3 black, 1/10 Hispanic, 8% other among Teen Outreach participants overall at all sites (presume variation between sites); comparison group had similar proportions-- within 2% difference. - In 1988-89, there were 1029 students in 28 cities at 60 sites (5 to 23 student participants per site); 75% female, 40% each white and black, 13% Hispanic; socioeconomically varied
Age/Grade of Target Population	Ages: 11-19; Grades: 7-12
Goals of the Intervention Program	Preventive intervention in group of problems: pregnancy (own or caused), school-course failure, school drop-out, and suspension
Approach	- Volunteer service by participants - Classroom discussions - Curriculum emphasizing making good decisions regarding a variety of life options (psychological enhancement? empowerment?) - Less than 10% of provided curriculum is sex education. - No contraceptive information in some of the classrooms. - Helper-therapy principle--that helping others can lead to personal growth, especially among "disempowered" groups (Riessman, 1965; Bronfenbrenner, Rappaport)-- is used.

Evaluation	
Evaluation Strategy	- Nested design involves comparing students within sites and comparing differences among diverse sites. Within-site variation and between-site variation examined. - Individual students provided confidential self-reports of pre-and post-program behaviors regarding school failure, dropout, suspension and pregnancy. - Factors examined for effects on behavioral changes: a) demographic--age, race, gender; b) structural program factors--whether for credit and whether in-school; c) intensity--number of volunteer and class hours; and d) curriculum factors (sites varied slightly in how much of each curriculum element was used) - In 1988-89, added measures of other behaviors: arrests, skipping school, alcohol or marijuana use, having sexual intercourse, using contraception, and activities, awards and educational aspirations
Methodological Weaknesses	- Sample sizes too small within sites for pregnancy evaluation. - Site locations not stated. - Authors' stated "tremendous diversity" of sites; some had self-selection of students; others had program facilitators target higher-risk youth for participation [this is being addressed in future, with goal of random assignment to treatment/control]. Some students previously involved in program; some arbitrarily assigned by facilitators and guidance counselors. Comparisons picked by participants themselves in some sites. Presume demographic diversity of sites also; not discussed. - Problem behaviors during course of year involve small numbers of students, especially pregnancy, so problems are grouped in this 1-year study at 0-3 pretest; and 0-4 posttest # of problems possible. - Self-reports of problem behaviors late in spring will not necessarily be accurate regarding school failure. - Cannot estimate program effects on individual problem behavior of pregnancy until later years of program, with larger sample sizes. Almost too rare an outcome, especially at younger ages. Still, chapter shows consistent proportion of 4% or less in program becoming pregnant/causing pregnancy year by year as compared to about 6% in comparison groups--during the school year (no data on what happened later). In 1988-89, pregnancy and receipt of an award were 2 outcomes with statistically significant difference between Teen Outreach and comparison students.
Has report been peer-reviewed?	Yes
Method Used	- Predominantly multivariate analysis, although means and standard deviations presented regarding between-site differences in curriculum implementation and volunteer hours. - T-tests for significant differences in average numbers of problem behaviors. Multiple regression equations; blocks of groups of factors entered in hierarchical regressions.

Results Process Evaluations Associations Impacts	- Volunteering and classroom discussion/curriculum seem workable, although students' motivation to participate may limit group who will be included: self-selection unavoidable to this degree even with random assignment to treatment/control groups - [Authors state that 4 years of data indicate it reduces teen-age pregnancy and school suspension and dropout rates (but not school course failure) by approximately 30 to 50% relative to matched comparison groups of students in a manuscript unpublished at time of article's publication--cannot evaluate accuracy via this source] - Students with more problems at beginning had more at end--important to measure both. However, they found no interactions between demographic characteristics or other program factors and entry/exit problem level. - Associations seen here between average number of hours of volunteer work at a site and having fewer problems at exit - Structural factors were not associated with outcomes--in-versus-after school and for-credit versus not-for-credit. - Demographically, the sole significant predictor of exit problem level was student grade level. Results for students at higher grade levels (high school) showed more participation associated with fewer problem outcomes than entry-level data predicted (even after excluding drop-out because of confounding problems). Comparison students did not exhibit this grade-level influence. - Overall, greater site-average volunteer hours and older students were associated with most positive outcomes; other demographic factors (gender and race/ethnicity) appeared unrelated. - Despite difficulties in multi-site evaluation and self selection, researchers' sophistication lends credence.
Special notes, comments	- Not a contraceptive-based program. - Supervision and alternative activity provided by both volunteer and any outside-of-school classroom activity cannot be overlooked as influences in themselves; presumably, the more hours spent on these, the fewer hours available for problem behaviors. - Program facilitators as caring mentors also possible source of influence. - Could not evaluate curriculum effectiveness as usage did not vary much across sites.

Name of Program	Teen Outreach Program
Reference/citation	Allen, J.P., Kuperminc, G., Philliber, S., and Herre, K. 1994. "Programmatic prevention of adolescent problem behaviors: The role of autonomy, relatedness, and volunteer service in the Teen Outreach Program." American Journal of Community Psychology, 22:617-638.
Time Period of Evaluation	1987 to 1992
Sponsor	Association of Junior Leagues International
Description	
Location(s)	66 different sites nationwide
Sample Size	1,020 participants and 1,013 comparison students
Age/Grade of Target Population	Grades 7 to 12; aged 11 to 19
Goals of the Intervention	Preventive intervention in group of problems: pregnancy (own or caused), school-course failure, school drop-out, suspension
Approach	- Participants engaged in volunteer activities provided to them by their facilitators, working in conjunction with volunteers of local Junior Leagues. - Ongoing classroom-based discussions once a week throughout the academic year; includes group exercises, films, and informational presentations. - Topics covered include understanding yourself and your values, communication skills, dealing with family stress, human growth and development, and issues related to parenting.
Method	Bivariate tabulations, hierarchical regression

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Evaluation	
Evaluation Strategy	- Quasi-experimental design involving Teen Outreach students and a comparison group of students closely matched on various background factors. - Comparison students were chosen in one of 3 ways: 1) Teen Outreach students nominated other students whom they guessed "would fill out the entry questionnaire about the same way they did"; 2) school personnel matched classrooms of students participating to similar non-participating classrooms; or 3) students randomly selected to participate. - Attrition was 2.4% among participants and 2.7% among comparison students - Self report questionnaire at entry and in final month of program.
Methodological Weaknesses	- Selection of comparison groups sometimes problematic
Peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- Both students and facilitators rated the program relatively highly, but there was significant variation across sites. - Average site gave its participants 33.5 hours of volunteer work; all except 6 of these sites provided an average of at least 1 hour per month. - Student and facilitator rating of program's promotion of autonomy and relatedness and total amount of volunteer hours were positively correlated with average grade-level of students but not other student characteristics. - Participants significantly decreased levels of problem behaviors (failure of courses, suspended from school, pregnancy), relative to the comparison group, from program entry to exit. - No interactions of the relation between entry and exit levels of problem behaviors with student demographic characteristics or any of the program factors examined in the study. - Analyses of individual sites showed no unmeasured school-wise factors that might have influenced changes in problem behavior levels of both participants and comparison students. - In regression, decrease in problem behaviors remained even when controlling for students' grade level, gender, race/ethnicity, entry problem behaviors, parents' level of education and household composition. - Student's perceptions of the extent to which program promoted their autonomy and relatedness predicted lower levels of problem behaviors, net of controls. Also a significant interaction of student grade level and with autonomy/relatedness (predicted lower behavior problems in middle schools but not high schools). - Facilitator ratings of autonomy/relatedness also interacted with grade level (middle, but not high school). - Student ratings of volunteer experiences were positively related to lower levels of problems among middle school but not high school students. - No significant effect of number of hours worked.
Special notes, comments	- 66 sites that voluntarily participated in the extended process evaluation were a subset of the 123 sites that participated in outcome evaluations. - Significant diversity among programs in terms of how different aspects of program are implemented.

Name of Program	Teen STARS: Students Taking Responsibility About Sexuality
Reference/citation	Rind, P. (1992). Peer support to keep teenagers alive and well. *Family Planning Perspectives, 24*(1): 36-40.
Time Period of Evaluation	Not stated
Sponsor	Planned Parenthood of Maryland and Centers for Disease Control
Description	
Location(s)	Baltimore, MD
Sample Size	Not stated
Age/Grade	Aged 19 and younger in public high schools
Goals of the Intervention	Get adolescents to use condoms to lower their risk of contracting HIV
Approach	- Recruited Baltimore adolescents by giving demonstration classes in public school classroom and leaving fliers in health clinic waiting rooms. - Teens who want to participate are divided into same sex groups of less than 20. - Groups meet biweekly from 4-6:00 p.m. - Meetings are run by 2 group leaders who are staff members with a health education background. - Travel stipend of $5. - Participants can also make 4 individual appointments to talk with a group leader about personal problems.
Evaluation	
Method	Bivariate tabulations
Evaluation Strategy	- Participants receive a questionnaire at first and last meetings.
Methodological Weaknesses	- Attrition is a major problem: in the second year, just over half the participants who attended the 1st session also attended the last. - Information on the specifics of the evaluation is sketchy. - Selectivity may be a problem because of voluntary participation. - No control or comparison group.
Peer-reviewed?	?? In Program spotlight, not an actual article

Results Process Evaluations Associations Impacts	- At end of program, the teens were no more likely to choose a partner based on HIV risk or to use a condom than they had been at the beginning. - Anecdotal evidence that specific teens, especially young women who have never been sexually active, seem to have more control over their lives and feel empowered. - They are concerned that teens face so much violence in their daily lives that they believe "It won't matter if I get AIDS because I'm going to get shot in the street anyway".
Special notes, comments	- Program costs $100,000 first year, $200,000 2nd, $150,000 the 3rd year.

Name of Program	Teen Talk
Reference/citation	M. Eisen, G.L. Zellman and A.L. McAlister. 1990. Evaluating the impact of a theory-based sexuality and contraceptive program, *Family Planning Perspectives*, 22(6): 261-271. M. Eisen, G.L. Zellman and A.L. McAlister. 1992. A health belief model-social learning approach to adolescents' fertility control: Findings from a controlled field trial. *Health Education Quarterly, 19*(2): 249-262. M. Eisen, and G.L. Zellman. 1992. "A health beliefs field experiment." In Miller, B.C., Card, J.J., Paikoff, R.L., and Peterson, J.L. (Eds.). Preventing adolescent pregnancy. Newbury Park, CA: Sage Publications.
Sponsor	NICHD (Grant # HD22982), Texas Department of Human Resources, Hogg Foundation for Mental Health, and University of Texas at Austin Research Institute
Description	
Location(s)	Seven Sites: Rural, South-Central TX; Rural, South-Western TX; Urban central TX; San Francisco Bay area (2 sites); San Francisco East Bay Health Center; North-Central CA
Time Period of Evaluation	June 1986 to August 1987 (Time 1 interview); July 87-September 88 (Follow-up)
Sample Size and Populations Served	1,444 adolescents from Sites 1-7 completed baseline; 1,328 intervention and control group subjects completed immediate follow-up; 888 1-year follow-ups; of the 1,444 Time 1 interviewees: 52% Hispanic, 23% black, 16% white, and 9% other race/ethnicity
Age/Grade of Target Population	Aged 13-19, recruited by agencies (public school classes, remedial summer classes, and work-study summer programs), low-income, inner-city youth targeted, only 4% were aged 18 or 19.
Goals of the Intervention	Learning appropriate ways of preventing pregnancy via personal and interpersonal benefit motivations
Approach	- Health Belief Model (HBM) - Social Learning Theory (SLT) - Stresses the serious consequences of teen pregnancy, and consequences of use/nonuse of contraception--public health approach - Length varies, usually 2-3 weeks, 8 to 12 hours - Lectures, simulations, guided discussions, and role playing

Evaluation	
Evaluation Strategy	- Experimental design: random assignment (individually or by classroom) to experimental (HBM-SLT program) and comparison programs (sex education programs already in use). - Males and females analyzed separately. - Pre and post test with 1-year follow-up. Time 1 refers to pre-test, Time 2 to immediate post-test, and Time 3 to the one year follow-up.
Methodological Weaknesses	- Not a representative ethnic mix, but considered probably representative in areas of study for outreach programs. - TX review boards wouldn't allow determination of the participants' age at first intercourse or # of sexual partners. - High attrition: Lost one-third at 1-year follow-up
Peer-reviewed?	Yes
Method Used	- Repeated measures analyses (paired *t* tests) - Stepwise multiple regression; creation of contraceptive efficiency index. - Used comparisons with NSFG and NSAM, adjusted for demographic characteristics of seven sites. Found their sample more like the 1982 than the 1988 samples. Males at baseline much less likely to use effective method than national adjusted group. - Used discriminant function analysis to compare those who completed 1-year follow up with those who didn't. - Combined data from various sites after testing for differences in 1-year follow-up contraceptive efficacy among comparison group.
Results Process Evaluations Associations Impacts	- From Time 1 to Time 2, both groups had increased sexual and contraceptive knowledge, but Experimentals (Es) had significantly greater knowledge than Controls (Cs), net of baseline knowledge and demographic characteristics. - There was no significant difference in health beliefs scale by group. - At 1 year follow-up, multivariate analyses (controlling for demographic and time variables) of male virgins at Time 1 found that HBM-SLT group membership, being non-black, attending church more frequently, being at or above grade level for one's age, and having less expectation of becoming sexually active in the next 3 months were significant predictors of abstinence stability. Among girls, less expectancy of coital activity in next 3 months, higher perceived barriers to birth control use, greater perceived serious negative consequences of resolving a teen pregnancy, higher educational aspirations, being *below* grade level, and fewer perceived benefits of effective birth control use at Time 1 predicted abstinence maintenance. - Among males initiating intercourse after baseline, no significant difference in contraceptive use at first intercourse or use at most recent sex. - Surprisingly, females in comparison programs who became sexually active during the study were more likely to use effective contraceptives consistently (contraceptive efficiency) than experimental females who became sexually active. - Among males who were sexually experienced at baseline, there was a significant treatment effect in contraceptive efficiency at 1 year follow-up; contraceptive efficiency at baseline, sexual knowledge at baseline, not Hispanic, and living with both parents also predicted higher contraceptive efficiency. For females, treatment had no effect on contraceptive efficiency among those sexually experienced at Time 1. - No significant group differences in pregnancies reported.

Special notes, comments	- No other studies had measured susceptibility, seriousness, benefits, and barriers to fertility control, so new measures developed, and revised in the field. Some of the scales had only moderate reliability (alpha coefficients). - Males seem to need to learn more about reasons for contraception and consequences. Hispanics had lowest efficiency levels, despite program having been aimed at them to a large degree.

Name of Program	Teen-Aid Family Life Education Project
Reference/citation	S. Weed, J. DeGaston, J. Prigmore & R. Tanas. 1991. "Fourth year evaluation report prepared for OAPP," Salt Lake City, UT: Institute for Research and Evaluation. S. Weed & R. Tanas: "Prevention in focus: A conference summary". Spokane: Teen-Aid, 1994.
Sponsor	Teen-Aid, with grant from OAPP
Description	
Location(s)	Idaho, California, Washington, and Oregon: 24 schools
Time Period of Evaluation	1990-91
Sample Size and Populations Served	73% sexually inexperienced males and females
Age/Grade of Target Population	Junior high students; average age 13.8
Goals of the Intervention Program	Promotes abstinence--decrease transition to sexual activity
Approach	- Abstinence from a health standpoint - Parent workshop - Parentgrams: taken home and discussed with parents and returned to class
Evaluation	
Evaluation Strategy	- Pretest/ posttest comparisons - 4th year looked at survey responses regarding intention to initiate sex - Divided into groups with teachers sympathetic to approach and those less so
Methodological Weaknesses	- Outcomes are stated behavioral intentions. - Schools which produced weak and negative results in the previous year chose not to continue the program - No comparison or control group
Has report been peer-reviewed?	No

Method Used	Path model analysis, factor analysis, analysis of covariance, t-tests
Results Process Evaluations Associations Impacts	- Can only compare pre-test/post-test differences on surveys. - Global measure of sexual values (abstinence and premarital sex) showed large pre-post difference. - High **future orientation** negatively associated with perceived peer pressure; positively associated with sexual values and abstinent intentions regarding sexual behavior. - Did not find ethnic differences, although not very many blacks or Hispanics. - Found that among students who had teachers who really endorse (higher implementation and higher consistency) the program, there was a small change in intention to have intercourse.
Special notes, comments	- Interesting path diagram and atypical list of factors found not important - Teen-Aid is a nonsectarian, nonprofit premarital abstinence organization which does not believe in "dual messages" and does believe in teaching fetal development.

Name of Program	Teenage Parent Demonstration
Reference/ citation	R. Maynard, W. Nicholson, and A. Rangarajan. (1993). "Breaking the cycle of poverty: The effectiveness of mandatory services for welfare-dependent teenage parents". Princeton, NJ: Mathematica Policy Research, Inc. D. Polit. (1992). "Barriers to self-sufficiency and avenues to success among teenage mothers". Princeton, NJ: Mathematica Policy Research, Inc. R. Maynard and A. Rangarajan. 1994. "Contraceptive use and repeat pregnancies among welfare-dependent teenage mothers," *Family Planning Perspectives,* 26(5): 198-205. R. Maynard (Ed.). 1993. "Building self-sufficiency among welfare-dependent teenage parents: Lessons from the Teenage Parent Demonstration", Princeton, NJ: Mathematica Policy Research Institute, Inc.
Sponsor	U.S. Department of Health and Human Services
Description	
Location(s)	Newark, NJ; Camden, NJ; and Chicago, IL
Time Period	Evaluation mid-1987 through the present
Sample Size	5,297 parenting teens receiving AFDC (2,650 regular; 2,647 enhanced services; 3,999 black, 900 Hispanic)
Age/Grade	More than 2/3 are 18 or over
Goals	Promotion of self-sufficiency and delay of subsequent pregnancy
Approach	**Enhanced Services Group**: Case management services, counseling, and education/training to parenting teens - Financial penalties--roughly $160 reduction in monthly welfare grant--on teens who persistently failed to participate in planned activities (normal welfare grant for mother and one child in the study period was $322 in NJ and $268 in IL) - Mandatory workshops to promote personal and parenting skills, increase awareness of contraceptive methods and STDs, and prepare them for later education/training/employment (6 workshops, total 9 hours, 3 consecutive days in Chicago; in NJ, 5-12 weeks, 80-100 hours) - On-site GED courses and job readiness counseling - Child care and transportation provided as needed (including financial assistance, counseling on child care, emergency child care options, on-site care for use during program activities, and van service to and from selected activities) - Workshops aimed at helping teens delay repeat pregnancies, plan future childbearing, and develop life/family management skills - Case managers trained to provide family planning counseling to complement family planning workshops **Regular Services Group:** AFDC benefits and the limited social and support services normally available under the program

Evaluation	
Evaluation Strategy	- Random assignment to regular services or enhanced services groups - Group administered intake forms and basic skills test at baseline; gave follow-up interview and re-tests an average of 29 months after intake were conducted one-on-one by evaluation contractor -Also collected administrative data from UIH records and AFDC records
Methodological Weaknesses	- Program variations in sites; variations in attendance --21% attendance in Newark family planning workshop - Very sophisticated evaluation
Peer-reviewed?	Yes
Method Used	- Binomial logit models to test effects of background variables on contraceptive use and repeat pregnancy - Multinomial logit models for effects of exogenous variables on choice of a method and the outcome of most recent pregnancy - Zero-one differencing method averaged to get mean effect on outcome probability - Each model controlled for age, race/ethnicity, lived with single parent, mom teen parent, parent education, living with a parent (and parent's employment status), personal health problems, low-birthweight first child, current age of first child, young mother's education, basic skills level, dropout history, and employment history, her history of sexual activity and prior contraceptive use, demonstration project site and the associated social and economic factors that may affect outcomes within a community. - Binomial variable indicated whether regular or enhanced services; interpreted as unbiased estimate of the effect of the enhanced services on repeat pregnancy

Results Process Evaluations Impact Evaluations	- Higher proportion of sample in Camden was Hispanic and the Chicago population was slightly older; average age started receiving AFDC was 18 years; nearly 70% had mothers who were teen parents; 42% grew up in single parent households; 63% were raised in a household that had received welfare at some time; 93% had never been married. - Some received support from child's father (45%), but only 17% received it regularly; about 40% of fathers had regular contact with mother and child. - Focus group and in-depth interviews suggest these young mothers had aspirations for themselves and their children similar to older mothers and middle-class teen parents; positive attitudes toward working, aspired to more education, longed for economic independence and a safe and comfortable place to live. - At enrollment, 54% of full sample (68% of Hispanic mothers) had used NO form of contraception at last intercourse; 27% had never used any form of contraception (sexually active an average of 3 years); at follow-up, 17% still reported using no method at last sex. - 64% had had at least one repeat pregnancy by follow-up; 21% had had 2 or more - Those with enhanced services were less likely to use an ineffective method of contraception ($p<0.10$); no statistically significant difference in any use or more effective contraceptive use; however, when assessed by site, no significant effects on contraceptive use. - In Camden: those with enhanced services were less likely than those with regular services to have a repeat pregnancy; in Newark and Chicago, enhanced services participants were **more** likely to have a repeat pregnancy ($p<0.10$). - Those with enhanced services were more likely to decide to carry their pregnancies to term ($p<0.10$), but when analyzed by site, effects were not significant (direction same: more likely to choose birth and less likely to have them end in abortion). - In Newark, mothers who completed the extensive family planning workshop were significantly more likely to use effective contraception (no such effects for less extensive workshops). - Lowest in basic skills had highest probability of adverse outcomes.
Comments/Notes	- These results suggest that a modest level of family planning services is not likely to significantly reduce the incidence of repeat pregnancies or delay them. - In another evaluation of the effects of this demonstration on other outcomes, 2/3 of those receiving regular AFDC services were in school/job training/employment 2 years after enrollment, while 80 percent of those in enhanced services group were active; most effective in increasing school enrollment; impacts were also greatest among Hispanics.

Name of Program	Too-Early-Childbearing Programs
Reference/citation	D.K. Walker & A. Mitchell, "Evaluation of the Too-Early-Childbearing Programs," Ch. 7 in J.J. Card 1988 volume
Sponsor	Charles Stewart Mott Foundation
Description	
Location(s)	Boston, MA; Corpus Christi, TX; Oakland, CA; Rochester, NY; Sarasota, FL; Seattle, WA; and St. Louis, MO
Time Period of Evaluation	1978-1988
Sample Size	Varied populations, including Native American (Seattle site), Hispanic (Corpus Christi), African American (Sarasota)
Age/Grade	Pregnant teen females (age 16 average at intake)
Goals of the Intervention Program	- Reducing incidence of repeat births, increasing high school graduation/GED - Largely prenatal and postdelivery goals
Approach	At least 10 different programs, using a variety of approaches, such as sex education, contraceptive use counseling, home visits, hospital-based or school-based clinics, community organizations, and post-delivery programs.
Evaluation	
Evaluation Strategy	- Comparison of experimental outcomes with what appear to be appropriate comparison groups or population of same ethnicity, etc. from the National Survey of Family Growth (NSFG) - Program staff involvement in evaluation
Methodological Weaknesses	- Repeat births, not pregnancies, were an outcome due to greater accuracy of counting - Does not appear that comparisons for repeat births were ethnically appropriate groups
Peer-reviewed?	Not sure
Method Used	Simple percentages; OLS regressions

Results Process Evaluations Associations Impacts	- Percent having a repeat birth within 24 months was very high among Native Americans with Seattle site (39.5%), but no comparison data available for this population. - Corpus Christi (Hispanic) site: 13.5% repeat pregnancy; Sarasota, 21.5%; Boston, 15.7%; Oakland, 12%; and Rochester 22.6%. - NSFG: 22% overall; NLSY: Blacks 21%; Hispanics 39% for under 17 years old and 23% 17-18 years old at 1st birth. - Oakland, Boston, and Corpus Christi appear very successful; Sarasota and Rochester same as "comparison" and no information for Seattle.
Special notes, comments	

Name of Program	True Love Waits
Reference/citation	Participation Guide for Families and Groups. Nashville, TN: True Love Waits.
Sponsor	True Love Waits (Southern Baptist Church affiliation)
Description	
Location(s)	Nashville, TN is the organizational home
Time Period of Evaluation	No evaluation
Sample Size	--
Age/Grade of Target Pop.	Presumably male and female teenagers, high school age (parent involvement less appropriate to those in 20s)
Goals of the Intervention	Delay sexual initiation until marriage: family, peer, church support for this publicly announced decision
Approach	- Promotes abstinence until marriage - Family devotional with covenant - Church worship service with sexual purity focus - Motivation stresses positive reasons for delaying sex: love for God, current date, future mate, future child, and oneself. - Strong emphasis on marriage
Evaluation	
Evaluation Strategy	N/A
Methodological Weaknesses	N/A
Has report been peer-reviewed?	No
Method Used	N/A
Results	Abstinence is proven effective in prevention of pregnancy and many STDs

Special notes, comments	- Not limited to sexually inexperienced teens; however, later ages at marriage less compatible with program than an unstated assumption of early marriage - Appears more geared toward females than males; may be double standard - Public aspects might not be acceptable to some teenagers (or youth in their 20s) desiring more privacy.

Name of Program	Untitled/Banks and Wilson
Reference/citation	Banks and Wilson. (1989). "Appropriate sex education for black teens". Adolescence, 24(93):233-245.
Description	
Sample Size and Populations Served	207 low income black youths
Age/Grade of Target Population	Not stated
Evaluation	
Method	Cross-tabulations
Methodological Weaknesses	- Not nationally representative - Don't specify how sample was selected - Retrospective study of sexual behavior - Not multivariate - No tests for significance
Results Process Evaluations Associations Impacts	- Youth had more positive relationships with mothers than fathers and relationship with father declined over time. - Boys tended to report ages they should be allowed to date that were older than the ages they actually did date (didn't look at by individual, only by proportions). - Only 23% of boys and 56% of girls said they had birth control information when they had sex for the first time. - Girls were twice as likely to report learning about birth control from their parents as boys. - 49% of boys and 27% of girls said that birth control was the responsibility of the girl only. - Youth were more likely to say they would feel comfortable talking to friends about a serious problem than teachers, counselors, or ministers. - 63% of girls and 44% of boys said they used no birth control at first sex. 39% of girls and 27% report using no birth control now.
Special notes, comments	-This is not an evaluation of an intervention. Rather, it is a needs assessment for an intervention.

Name of Program	Untitled/Danielson, et al.
Reference/citation	Danielson, R., et. al. (1990). "Reproductive Health Counseling for Young Men: What does it do?" Family Planning Perspectives, 22:115-121.
Sponsor	Office of Family Planning, DHHS
Description	
Location(s)	Northwest Kaiser Permanente HMO facilities in Portland, Oregon, and Vancouver, Washington.
Time Period of Evaluation	June 1985 to November 1986
Sample Size and Populations Served	Males who had ambulatory care at 7 participating medical offices. Recruited by phone (reached 94%), of 2,602 potential participants 1,449 who volunteered. Scheduling was successfully completed for 1,195. Sample is predominantly white. 971 completed the follow-up (82%).
Age/Grade of Target Population	Aged 15-18
Goals of the Intervention	- Promote abstinence and contraception - Serve subjects who were sexually inactive as well as those who were active - Appeal both to the youths and their parents - Administer the consultation in a way that did not label subjects as being sexually active or having a sexual problem
Approach	- Reproductive health consultation including half hour viewing of a slide-tape program and a half hour visit with a health practitioner.
Evaluation	
Method	Logistic regression
Evaluation Strategy	- Before-after experimental design, subjects randomized into participant or non-participant groups. - Self-reported baseline and follow-up questionnaire (one year later). - Questionnaires were completed in medical office examining rooms or similar place. - Separate analyses for sexually active and not at baseline. - Given a $15 travel allowance
Methodological Weaknesses	- Data are not yet available on nonparticipants compared to participants.

Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- Sexual activity: little difference in proportion sexually active; of those not sexually active at baseline, 30% of the intervention and 34% of the controls became active; of those sexually active at baseline, 90% and 91% were active at the follow-up, respectively. - Sexual impatience (i.e. negative or uncomfortable feelings about never having engaged in intercourse) was strongest indicator of intention to have unprotected sex in a hypothetical dating situation among virgins. Those who were exposed to the intervention were less sexually impatient. - Among males sexually active at baseline, there was practically no difference by group in method used at last intercourse at baseline. By the follow-up contraceptive use improved, and the intervention was significantly associated with contraceptive effectiveness, especially among those who were not sexually active at baseline. This is primarily due to partner's use of the pill. - Among those sexually active at baseline, those who had the intervention were more likely to agree that birth controls pills are very safe than controls. - Among those not sexually active at baseline, knowledge of the fertility cycle was significantly higher. - Association of AIDS knowledge with the intervention was weak. - Among those not sexually active at baseline, attitudes toward coercive sex were negatively related to intervention, but the intervention had no impact on the % of males who reported that they had had intercourse when their partner had not wanted to. - Intervention was positively associated with testicular self-examination.
Special notes, comments	- Health practitioners and patient education can play an important part in men's sexual activity and contraceptive use. - Especially important to intervene before men become sexually active.

Name of Program	Untitled/Earls, et al.
Reference/citation	Earls, F., Robins, L.N., Stiffman, A.R., and Powell, J. (1989). "Comprehensive health care for high-risk adolescents: An evaluation study". American Journal of Public Health, 79(8):999-1005.
Sponsor	Robert Wood Johnson Foundation
Description	
Location(s)	Seven primary health clinics in Boston, MA; New Haven, CT; Indianapolis, IN; Chicago, IL; Jackson, MS; Dallas, TX; and Los Angeles, CA. Comparison clinics in Buffalo, NY; St. Louis, MO; and New Orleans, LA.
Time Period of Evaluation	November 1984 to May 1985
Sample Size and Populations Served	- Between 150 to 360 youth were sampled from each clinic. During the study period 3,102 patients became eligible and 2,788 were interviewed on site. 87% were reinterviewed (most of which occurred in the home) 12 mos. later. Complete data are available for 72% of the original sample. - Sample was predominantly female and black.
Age/Grade of Target Population	Aged 13-18
Goals of the Intervention	Improve the health care of high-risk populations of adolescents
Approach	Comprehensive Health Care Clinics funded to provide comprehensive services to youth at high risk were compared to clinics which did not offer special services to teens.
Evaluation	
Method	Cross-tabulations
Evaluation Strategy	- Two wave survey, interviewed at baseline and at follow-up 12 months later. - Compared to clinics that did not offer special services (not funded).
Methodological Weaknesses	- Non-representative sample - Short evaluation period - Don't control for any socioeconomic or demographic differences even though they know the distribution by gender and race

Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- Youths in the funded clinics were more likely to inform providers about their behavioral and life-style problems than youths in the comparison clinics. - While youths in the funded neighborhood/hospital based clinics and the comparison clinics had the same mean number of risk factors on the interview data, the number of risk factors documented in the records was significantly higher in the funded clinics. - Proportion of youths experiencing 3 or more risk factors remained the same from Wave 1 to Wave 2 for both the funded and the comparison clinics. - Frequency of STDs and having a second or third pregnancy were not reduced in the funded clinics compared to the nonfunded. - Proportion with unmet contraceptive needs remained uniformly high in all the clinics. - Percent reporting depressive symptoms and heavy alcohol/drug use at wave 2 was higher in youth in the funded clinics.
Special notes, comments	- Potentially, funded clinics attract high-risk youth, but proportion was similar to that of nonfunded clinics. - Funded clinics were not able to alter the propensity of their patients to continue their adverse life-styles. - Problem characteristics of high-risk youth are perhaps so deeply embedded in the economic and social contexts from which they come that improvement in their health status require more than medical visits can provide.

Name of Program	Untitled/Forrest and Silverman
Reference/citation	Forrest, J.D. and Silverman, J. (1989). "What public school teachers teach about preventing pregnancy, AIDS, and sexually transmitted diseases". Family Planning Perspectives, 21:65-72.
Time Period of Evaluation	1987
Description	
Approach	Not an intervention
Method	Descriptive tabulations
Evaluation	
Evaluation Strategy	Systematic random sample of public school teachers, included 9,800 teachers in varying specialties. 4,241 eligible teachers responded to the mail survey (response rate 45%). Analyses are weighted by specialty because of differing response rates and sampling fractions. Questionnaire was developed based on preliminary work in focus groups.
Methodological Weaknesses	- No assessment of effectiveness
Peer-reviewed?	Yes

Results Process Evaluations Associations Impacts	- 45% of public school teachers provided sex education in grades 7-12 in 1987-88 and the majority were women. - Sex education represents a small proportion of time: 60% say 10% or less of total teaching time and only 2% say it takes up more than half their teaching time. - Strong support for sex education; most important topics they felt were exercising responsibility regarding sexual relationships and parenthood; importance of abstinence and how to resist pressures to become sexually active; and information about AIDS/STDs. - AIDS, STDs, sexual decision-making, abstinence, birth control methods were covered by the vast majority of teachers in all grades from 7-12; abortion, homosexuality, safe sex practices and birth control sources were taught less often. - Teachers support sex education of many topics before the 7th grade, but in actuality they are rarely taught that early. All the topics are less likely to be covered than teachers think they ought to be and also less likely to be taught as early as should. - Teachers assessments of likelihood that their students have had sex appear reasonable when compared with other data. - Sex education teachers were asked true/false questions to assess their own knowledge and results show that only 72% correctly answered that having a baby is a greater risk for a teen than taking the pill; 63% correctly answered that pill use will not stunt growth; 34% responded that pill use does not have a detrimental effect on later fertility; 24% correctly reported that women who smoke can take the pill; and 23% said that pill use does not need to be stopped periodically to give body a rest. - Most commonly stated problem facing teaching sex education is pressure from parents, community, or administration. Almost as many report inadequate, unavailable, or dated materials.

Name of Program	Untitled/Forrest--Family Planning Programs
Reference/citation	Forrest, J. (1980). Exploration of the effects of organized family planning programs in the United States on adolescent fertility. Final Report. New York: The Alan Guttmacher Institute.
Time Period of Study	1970-1975
Description	
Sample Size and Populations Served	Aggregate age/race/marital-status-specific fertility rates; geographic areas are the unit of analysis (county level)
Age/Grade of Target Population	Teens
Evaluation	
Method	Cross sectional, lagged dependent variable, change and structural or path models for subgroups by race, age, and marital status
Methodological Weaknesses	- Makes other studies look really bad.
Has report been peer-reviewed?	Later when it was published in Family Planning Perspectives
Results Process Evaluations Associations Impacts	- Lower birth rates in areas with greater family planning enrollment - Steeper declines in white birth rates in areas with greater increases in program enrollment between 1970 and 1975 - Initially found no effects on nonmarital birth rates, but when 2-wave, 2-variable statistical models were developed to take account of sexual activity as an unobserved variable, it was found that program enrollment has strong and statistically significant negative effects on teenage nonmarital fertility rates.
Special notes, comments	

Name of Program	Untitled/Green and Sollie
Reference(s)/ Citation(s)	Green, S.K., and Sollie, D.L. (1989). "Long-term effects of a church-based sex education program on adolescent communication". *Family Relations, 38*: 152-156.
Sponsorship	Not given (Baptist church??)
Description	
Location(s)	Large southwestern city
Time Period of Evaluation	Not stated
Sample Size and Populations Served	24 experimentals, 22 comparisons; Es selected from a youth group at a Baptist church; Cs from a church of similar size, religious stance, SES and age group.
Age/Grade of Target Population	Grades 9-12 (14-18 yrs old)
Goals of the Intervention Program	- Increase sexual knowledge (not evaluated here), and increase communication about sexuality issues with parents and peers, and comfort level in discussing these issues openly. - Belief is (based on some literature) that increased communication with parents is related to less sexual experimentation and more effective contraceptive use.
Approach	- 10-hour weekend program - Presents positive and confirming view of sexuality through films, panel discussions, question and answer periods, and small group activities. - Issues discussed: sex roles, sexual identity, sexual arousal, premarital sex, masturbation, contraception, abortion, and homosexuality. - Also exposes teens to role models, including psychologists, ministers, medical personnel and small group leaders. - Stresses parent involvement in program to improve parent-child communication.
Evaluation	
Evaluation Strategy	- Pre test, post-test (2 week) and 4 month follow-up - Experimental and comparison groups, which were not randomly selected, and were not selected from the same pool of people (quasi-experimental--similar to selecting a comparison city)

Analytic Strategy/ Statistical Methods	- First, t-tests were done to determine the equivalence of the 2 groups (on demographic variables and pre-test dependents of sexual knowledge and communication/self-disclosure) since not randomly assigned. - Sexual communication was assessed by measuring the amount of self-disclosure to four target people: mom, dad, same-sex best friend, and dating partner (dating partner was excluded in many analyses due to few teens having one). - Repeated measures analysis of variance was used to test hypotheses about gender differences in self-disclosure by target person - Analyses of covariance were used to determine differences in level of self-disclosure to each target person, with gender and treatment as independents, and pre-test score as covariates. - Repeated measures analysis was used with increase scores (measured increase/decrease of amount of self-disclosure from pre to post), with gender as independent variable.
Methodological Weaknesses	- Quasi-experimental, self-selection into intervention, not random - Tiny sample - Short term evaluation - Does not assess effects on sexual behavior
Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- For females, disclosure to mother did not differ by gender, nor to father. Females disclose at higher level than males to same-sex best friend. - For males, disclosure to mother did not differ from to father; disclosure to best friend was significantly higher than to mother or father. For females, disclosure to best friend was significantly higher than to both parents, and disclosure to mom was significantly higher than to dad. - No significant effects for treatment were found on level of self-disclosure to any of the four target persons (using analysis of covariance, with pretest score on self-disclosure as covariate, gender and treatment as independents). Also no significant main effects for gender. - No significant main effect of gender on change from pre to immediate post (increase score). There was a significant effect for target person: disclosure increased the most to mother and father, and decreased slightly to best friend. - Even though there were no immediate post changes in level of self-disclosure, they checked for longer term (4 month) changes. No significant differences for groups were found in levels of self-disclosure to mom, dad or best friend. A significant main effect was found for gender on level of self-disclosure to dating partner at 4-month. Females in both E and C groups reported higher levels of self-disclosure than males in both groups. - Neither short-term nor long-term effects of program on self-disclosure were found. But they did find that over time communication with parents as compared to peers does increase significantly.
Special Comments/Notes	Weaknesses (other than methodological): very short-term intervention (one weekend)

Name of Program	Untitled/Herceg-Baron, et al.
Reference/citation	Herceg-Baron, Furstenberg, Shea, & Harris. 1986. "Supporting teenagers' use of contraceptives: A comparison of clinic services," *Family Planning Perspectives,* 18: 61-66.
Sponsor	Family Planning Council of Southeastern Pennsylvania
Description	
Location(s)	Metropolitan Philadelphia area
Time Period of Evaluation	January 1980 to September 1981
Sample Size and Populations Served	358 (½ Black; ½ White) 1% married; 90% full-time students (1/3 from mother-only family; most from 2-parent family)
Age/Grade of Target Population	Adolescents: 1/3 16 years. ; 1/3 < 16 years.; and 1/3 17 years old
Goals of the Intervention Program	Prevent pregnancy via practice of effective contraception
Approach	2 special services: - Greater involvement of adolescent's family, or - More frequent follow-up contacts
Evaluation	
Evaluation Strategy	- At each clinic site, participating teens were randomly assigned to two special-services groups and two control groups. - Special services were either Family Support or Periodic Support.
Methodological Weaknesses	- N too small for pregnancy outcomes - All motivated to go to clinic; but huge difference in % participation -- only 36% of family-support group attended any counseling sessions after 1st clinic visit - Not sure whether girls considered phone calls a substitute for a clinic visit
Has report been peer-reviewed?	Yes

Method Used	- Percent comparisons on outcomes such as family communication, clinic attendance, contraceptive use. - Life table analysis for pregnancy rates.
Results Process Evaluations Associations Impacts	- No significant differences in regularity of contraceptive use and pregnancy rates - Number of clinic visits didn't differ - However, with periodic support group, whether contacted by telephone calls made big difference in whether they got pregnant--researchers said unclear whether dropouts got pregnant intentionally or just had low motivation
Special notes, comments	- Any teens giving contradictory answerers regarding contraceptive usage dropped from analysis - Pregnancy reports always accurate? - Too short an observation period?

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Name of Program	Untitled/Jemmott, et al.
Reference/citation	Jemmott, J.B., Jemmott, L.S., and Fong, G.T. 1992. "Reductions in HIV risk-associated sexual behaviors among black male adolescents: Effects of an AIDS prevention intervention." American Journal of Public Health, 82(3):372-377.
Time Period of Evaluation	October 1988
Sponsor	Not stated
Description	
Location(s)	Philadelphia, PA
Sample Size and Populations Served	157 Black male adolescents (85 Experimental and 72 control) who were recruited from among outpatients at a medical clinic in West Philadelphia (44%); students attending the 10th, 11th, and 12th grade assemblies at a local high school (32%) and adolescents at a local YMCA (24%).
Age/Grade of Target Population	Mean age 14.64 years
Goals of the Intervention	Increase knowledge of AIDS and STDS and to weaken problematic attitudes toward risky behaviors. Included information about risk associated with intravenous drug use and specific sexual behaviors.
Approach	5 hour intervention. Videotapes, games, exercises, and other culturally and developmentally appropriate materials were used. Participants also engaged in role playing situations depicting potential problems in trying to implement safer sex practices. Controls received an intervention concerning career planning and opportunities.
Evaluation	
Method	Means and t-tests
Evaluation Strategy	Randomly assigned within age to either the AIDS condition or the career-opportunities condition and to one of 27 small groups (14 in AIDS condition and 13 in control). Pre- and post-intervention questionnaire, and three month follow-up.
Methodological Weaknesses	- Short term intervention and short term follow-up/assessment of effects - Didn't compare results among sexually active experimentals and controls
Has report been peer-reviewed?	Yes

Results Process Evaluations Associations Impacts	- Knowledge of AIDS and STD (index of 39 items--Alpha=0.73 to 0.82): experimental group had a significantly higher mean score than controls - Attitudes toward risky sexual behaviors (coitus, multiple sexual partners, no condom use, heterosexual anal intercourse): experimentals had less favorable attitudes than controls - Intentions of risky sexual behaviors: experimentals had weaker intentions than controls. - At 3 month follow-up: experimentals still scored higher on knowledge and still had weaker intentions toward risky sexual behavior. Attitudes was non-significant, but an interaction showed that the effect of the AIDS intervention on lowering attitudes was greater with female facilitators than male facilitators. - Risky sexual behavior: experimentals less likely to engage in risky behavior at 3 month follow-up than controls. Again, the reduction was greater with female facilitators. - No statistically significant difference (p<.10, marginal) in likelihood of practicing abstinence in 3 months after intervention (48% of experimentals had sex compared to 60% of controls). - They report that experimentals had fewer partners, less frequency of sex, less likely to be involved with a partner that has sex with other men. [These appear to be calculated among all males, not just sexually active males. Also useful to compare among males who are having sex.] - Experimentals had higher frequency of condom use, lower frequency of unprotected sex (no condom), less likely to have had heterosexual anal sex, fewer days of heterosexual anal sex.
Special notes, comments	

Name of Program	Untitled/Kuziel-Perri and Snarey
Reference/citation	Kuziel-Perri, P. and Snarey, J. (1991). Adolescent repeat pregnancies: An evaluation study of a comprehensive service program for pregnancy and parenting black adolescents. *Family Relations, 40*(4):381-385.
Time Period of Evaluation	1983 to 1987
Sponsor	Family Focus/Our Place, a nonprofit agency founded in 1979
Description	
Location(s)	Chicago suburb
Sample Size and Populations Served	52 unmarried black adolescent girls drawn from a larger sample of 296 adolescent girls who participated in a previous evaluation. The prior evaluation included every girl who became affiliated with the agency as a parent or pregnant adolescent between January 1979 and March 1985. The present subsample includes all girls in original sample who were a) single b) aged 12-19 c) pregnant with their first child and d) became affiliated with the agency from 1981 to 1983.
Age/Grade of Target Population	12 to 19
Goals of Intervention	
Approach	- Prebirth service (educational support) - Four comprehensive pre- and postbirth services: **Beginnings**, pregnancy education with information of motherhood and parenthood; **Partners**, pairing with expecting and novice mothers; **Sisterhood**, support group for women 18 years and older; **Educational Services**, educational/GED services, programs and course. - Three postbirth services (infant day care, well baby care clinic, drop in child care).
Evaluation	
Method	Cross-tabulations and point biserial correlation and multivariate hierarchical regression
Evaluation Strategy	- Assessed 2 years after referred to the agency and again follow-up 4 years after initial referral. - Interviews with staff who had access to subjects' attendance and utilization records.

Methodological Weaknesses	- Non-representative sample - Not comparing to any kind of control group, can't tell what effects would be if not at all affiliated with the program. - Small sample to run regression on.
Has report been peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- Over a 4-year period, 13.5% had a repeat pregnancy, 57% of which were within 24 months of their first delivery. - None of the variables measuring involvement in the agency's services had any significant effect on likelihood of repeat pregnancy. - Neither did having a sibling who was a teen parent, although age was significant. - Length of time without a repeat pregnancy: Involvement with the Partners program and the Beginnings program were significantly correlated with length of time without a repeat pregnancy; these effects held in multivariate models controlling for age, sibling teen parent, and other programs.
Special notes, comments	

Name of Program	Untitled/Lancaster--Media Campaigns
Reference/citation	Lancaster, J. 1994. "Media become message in fight to curb births: Actors, athletes used in sophisticated TV campaigns that have been a surprising success." Washington Post (September 11).
Time Period of Evaluation	No formal evaluations (review of initiatives)
Description	
Review	- The efficacy of radio and television in promoting government family planning programs may seem obvious, but governments have been slow to adopt modern marketing methods. Now with the growing availability of mass media even in the world's poorest rural areas it is a more viable idea. - Egypt disseminates its family planning message through television soap operas. A recent survey found that 63% of men and women of reproductive age recalled the messages of "Doctor's Diary" 3 years after it aired; 73% said they had first learned of family planning services through television. Viewers of a mini series which featured a family planning theme were more likely to believe a woman who uses contraceptives is "good" than nonviewers. Contraceptive use among married women of reproductive age rose from 38% to 48% between 1988 and 1992, thanks largely to mass media, according to the ministry of population. - Turkey: contraceptive use rose 4.2% over a four-month period following a 3 month media campaign built around a dramatic television series. - Zimbabwe: enlisted local soccer heroes to promote condom use and organized a rock concert featuring several popular musicians. - Mexico: called on a popular singing duo to promote sexual responsibility. - Brazil's most popular ads, an animated cartoon, cannot be described in a family newspaper, let alone shown on American TV, according to the Washington Post.
Special notes, comments	

Name of Program	Untitled/Moore, Blumenthal, Sugland, et al.
Reference(s)/ Citation(s)	Moore, K.A., Blumenthal, C., Sugland, B.W., Hyatt, B., Snyder, N.O., & Morrison, D.R. (1994). "State variation in rates of adolescent pregnancy and childbearing". Washington, DC: Child Trends, Inc.
Sponsorship	Charles Stewart Mott Foundation
Description	
Location(s)	All states, some analyses include DC
Time Period	Birth rates in 1990; abortion and pregnancy rates in 1988
Sample Size	50 states + DC
Age/Grade of Population	Aged 15-19
Goals	N/A
Approach	Not an intervention
Evaluation	
Evaluation Strategy	Not an evaluation of an intervention
Analytic Strategy/ Statistical Methods	OLS regression; dependent variables were birth, abortion and pregnancy rates; independent variables: state level policies, funding and contextual variables; controls for socioeconomic/demographic factors
Methodological Weaknesses	There is a lot of variation within states that cannot be captured in an analysis at the state level
Has report been peer-reviewed?	No

Results Process Evaluations Associations Impacts	**Main Findings:** - Public funding for contraceptive services predicts lower teen birth rates and lower non-marital teen birth rates, but has no effect on pregnancy resolution. - Public funding for abortion is associated with lower birth rates, especially among black teens, and with higher abortion rates. - Other state-level programs or policies had no association with birth, abortion or pregnancy rates, with one exception: the presence of a coordinated pregnancy prevention program in the state was associated with lower pregnancy rates.

Name of Program	Untitled / Polaneczky et al.
Reference/citation	Polaneczky, M., Slap, G., Forke, C., Rappaport, A., and Sondheimer, S. 1994. "The use of levonorgestrel implants (Norplant) for contraception in adolescent mothers." New England Journal of Medicine, 331(18): 1201-1206.
Time Period of Evaluation	First interview from September 1991 to July 1993; follow-up in April 1993
Sponsor	Research Foundation of the University of Pennsylvania, John Merck Fund, the Craig-Dalsimer Fund, The President's Council of Cornell Women, and the J.D. Hatcher Award Committee.
Description	
Location(s)	Urban teaching hospital in Philadelphia
Sample Size and Populations Served	100 adolescent mothers who gave birth at the Hospital of the University of Pennsylvania and who were scheduled to return post-partum to its family-planning clinic (91% agreed to participate); 48 who chose Norplant, 50 who chose oral contraceptives and 2 (not further studied) chose barrier methods of contraception. Predominantly single, black, poor, and lived in single-parent households.
Age/Grade of Target Population	17 or younger when they gave birth
Goals of the Intervention	
Approach	- Family planning counselor visited eligible adolescents before discharge from the hospital and presented Norplant as a contraceptive option during an individualized, nondirective counseling session. Structured interview and medical records reviewed at this time. - Scheduled to visit family planning clinic 2 weeks post-partum; at this time, chosen type of contraceptive was dispensed free of charge. Participants were interviewed about sexual activity, concern about future pregnancy, etc. Follow-up visits scheduled for 6 weeks post-partum and every 6 months thereafter. Participants using the pill were scheduled for an additional 3-month visit. - Follow-up gynecologic care was provided routinely as well as screening for sexually transmitted diseases (STDs). - Free condoms were dispensed and condom use was encouraged regardless of contraceptive method chosen.
Evaluation	
Method	T-tests, Chi-square tests, logistic regression, life tables

Evaluation Strategy	- Structured interviews conducted and medical records reviewed soon after delivery. - Compared Norplant users with pill users. - In April 1993, telephone interview about continuation of contraceptive use, satisfaction with method, additional pregnancies, sexual activity, and condom use. Records of family planning clinic and hospital were reviewed for pregnancies and STDs.
Methodological Weaknesses	- Selective sample - Since there is no true control group and no random assignment, could be self selection bias into Norplant group.
Peer-reviewed?	Yes
Results Process Evaluations Associations Impacts	- Choice of Norplant was associated with older age, multi-parity (more likely to have conceived and given birth before the index pregnancy), and previous use of oral contraceptives. No difference in attitudes, knowledge or use of contraception at time index pregnancy was conceived. No difference in future pregnancy intentions. - Norplant group more likely to return post-partum for contraception as scheduled. - Reasons cited for choosing Norplant were: difficulty remembering to take pills, side effects of pill, fear of pregnancy, ease of Norplant, and encouragement from others. - Pill users' reasons for not choosing Norplant were: fear of insertion/needles, concern for irregular bleeding, concern for other side effects, and fear implant would be visible. - At follow-up, no significant differences between Norplant group and oral-contraceptive group in frequency of clinic visits, failure to return after the postpartum visit, or incidence of sexually transmitted diseases. - Norplant users were more likely to report being "very satisfied" with their choice of contraception. - At follow-up, significantly more of the Norplant group (95%) were still using the method than pill group (33%). - Life table analysis shows that the probability that a specific method would be discontinued within 6 months was 0% for Norplant, and 45% for pill. - Reasons for discontinuing Norplant were: abnormal bleeding and hepatitis B infection; among Norplant users, 38% reported regular bleeding; 31% irregular bleeding; 24% irregular frequent bleeding; and 7% amenorrhea. - During the first post-partum year, 1 subject in the Norplant group (occurred shortly after removal of the implant) and 19 in the oral contraceptive group became pregnant. Five of the pill users who became pregnant subsequently chose Norplant. - Life table analysis predicted risk of pregnancy within first post-partum year was 2% for Norplant and 38% for Pill. - Logistic regression controlling for age, parity, previous pill use, and method chosen at baseline: only variable that predicted contraceptive continuation was Norplant (odds ratio=6.9) and only one predicting pregnancy was pill (odds ratio=5.2). - No difference in recent sexual activity or condom use between 2 groups. - Only 36% of those using no contraception at follow-up reported having had sex in the past month, compared to 80% of Norplant users and 88% of pill users.
Special notes, comments	

Name of Program	Untitled/Salz et al.
Reference/citation	Salz, E., Perry, A. and Cabral, R. "Attacking the personal fable: Role-play and its effect on teen attitudes toward sexual abstinence." (Unpublished manuscript). Detroit, MI: Merrill-Palmer Institute, Wayne State University.
Time Period of Evaluation	Not stated
Sponsor	Not stated
Description	
Location(s)	2 Midwest high schools with very high pregnancy rates
Sample Size and Populations Served	267 of 373 eligible students in Health classes (72% retention).
Age/Grade of Target Population	9th graders
Goals of the Intervention	Develop an intervention which would help teenagers of both sexes to emotionally confront their vulnerability to pregnancy and adopt more responsible attitudes that might lead to more responsible behaviors.
Approach	- 1) Video Role-Play group: role play concerning teens involved in pregnancy dilemmas and video taped this role play - 2) Video viewing group: watched the videos prepared by first group - 18 mixed sex subgroups of 4-5 students - Six sessions in the Fall semester
Evaluation	
Method	Bivariate tabulations
Evaluation Strategy	- Random assignment to 2 experimental (video role play: n=79; video viewing: n=95) or control (n=95) - Questionnaire administered at end of intervention
Methodological Weaknesses	- Non-representative, very specialized sample - High non-completion rate - No assessment of behaviors - No pre-test questionnaire given to assess baseline attitudes

Has report been peer-reviewed?	No
Results Process Evaluations Associations Impacts	- Girls had stronger positive attitudes toward premarital abstinence than boys. - The girls in one school (which on average had more traditional attitudes) who were in the video viewers group had more positive attitudes toward abstinence than control group girls; role player group was no different; the other school showed no difference; boys showed no differences in the first school but in the 2nd school it appears that role playing may have actually had a negative effect. - Attitudes toward contraception: girls more likely to endorse contraceptive use; among girls in the 2nd school role players had slightly higher scores than control group; again boys in experimental groups might even have negative effect.
Special notes, comments	

Name of Program	Untitled/Wellisch et al.
Reference/citation	Wellisch, J., Prendergast, M.L., and Anglin, M.D. (1994). "Drug-abusing women offenders: Results of a national survey". National Institute of Justice: Research in Brief, October.
Time Period of Evaluation	1992 to 1993
Sponsor	UCLA Drug Abuse Research Center and National Development and Research Institute, with funding from National Institute of Justice.
Description	
Location(s)	40 states (including DC)
Sample Size and Populations Served	336 alcohol and drug programs were identified and returned questionnaires yielding data for 176 community-based programs, 16 jail programs, and 53 prison programs.
Age/Grade of Target Population	No Impact Evaluation
Goals of the Intervention	Not clear
Approach	Family planning offered in drug/alcohol treatment programs
Evaluation	
Method	Tabulations
Evaluation Strategy	2 questionnaire forms mailed for community-based programs and corrections-based programs.
Methodological Weaknesses	- No impact evaluation
Peer-reviewed?	?? Probably not
Results	- Family planning was offered in 78% of the women-only residential programs and in 70% of the outpatient programs. In outpatient drug free/day treatment programs, family planning was more available in women only programs (68%) than both sex programs (47%).
Special notes, comments	

Name of Program	Untitled/Winter and Breckenmaker
Reference(s)/ Citation(s)	Winter, L. & Breckenmaker, L.C. (1991). "Tailoring family planning services to the special needs of adolescents", *Family Planning Perspectives, 23*(1), 24-30.
Sponsorship	Ford Foundation funded; project run by the Family Health Council of Central Pennsylvania
Description	
Location(s)	Central Pennsylvania (six delegates in various counties)
Time Period of Evaluation	Not stated
Sample Size and Populations Served	1261 patients, almost all under age 18 (a few 18 year olds); Treatment (n=518), Comparisons (n=738); 98% white, 1% black, <1% Hispanic
Age/Grade of Target Population	Age under 18 (18 year olds were occasionally enrolled if clinic staff thought they were at risk for some other reason, such as being "developmentally slow"
Goals of the Intervention Program	- Shift focus of family planning services from medical model to psychosocial model - Increase knowledge of patients of basic reproduction, contraceptives and STDs - To improve patient satisfaction with services provided, to increase continued contraceptive use, and to prevent unintended pregnancies.
Approach	- To develop total service delivery system: changed education session from group to one-to-one; visual aids used; initial visit was scheduled as 2 appointments to ease teens' anxiety about medical exam (counseling and education at first visit and exam at second appointment which was no more than 2 weeks after first visit; patient began using medical method after 2nd visit); additional follow-up visit 6 weeks after index visit. - Clinic staff added 5 minutes to initial phone contact, 15-20 minutes **(added)** to education session, 10 more minutes to medical exam. - Special training for staff regarding adolescent psychosocial development. - Made teen extra comfortable during exam. - Staff person designated and specially trained to be teen counselor. - Male participation encouraged when possible. - Helped teens resist peer pressure. - Strongly encouraged parental involvement. - Stressed confidentiality.

Evaluation	
Evaluation Strategy	- Assessed at 1-2 months for baseline; next 6 months were treatment phase; follow-up was done 12 months after index (first visit in study). - Pretest-posttest design with exposed and nonexposed groups of nonrandomly selected patients; 3 experimental sites, 3 comparison sites. - At baseline all 6 administered a Patient Satisfaction Survey (PSS) and a Knowledge Quiz (KQ); at each follow-up Es and Cs were given PSS, KQ, and Method Use Questionnaire (MU) to get method, pregnancy and related issues. The 6 months after baseline were the treatment phase; the 3 experimental sites provided services based on the experimental protocols above; 3 comparisons continued their usual service delivery. Treatment phase continued for one year from index visit.
Analytic Strategy/ Statistical Methods	Factor and reliability analyses of Satisfaction Scale and Knowledge Quiz, independent-means t-tests, chi-square tests, analysis of variance with interaction of study phase with site type (E or C)
Methodological Weaknesses	- The authors acknowledged that if Es and Cs experienced different drop-out rates, that their observed effects may be related to selectivity of continuation. They found the rates to be the same between Es and Cs, and concluded that this was not a problem. However, they did not compare dropouts on other characteristics (such as demographics, method use, etc) to see if these groups differed, which could also explain effects. If non-users dropped out of the Es, but drop-out among Cs was "random", then we would probably see lower pregnancy rates (based on non-drop-outs only) among Es than Cs. - They said their goal was to prevent unintended pregnancy, but their analysis looked at overall pregnancy rates; not a major problem, but something they should mention in their discussion. - Their analyses do not pinpoint what aspects of intervention lead to positive findings; e.g. adding 20 minutes to education session is costly, don't know if this was actually associated with outcomes. - Not very representative sample--mostly white.
Has report been peer-reviewed?	Yes

Results Process Evaluations Associations Impacts	**Baseline comparisons:** to test equivalence of E and C sites at baseline - Quiz scores did not differ significantly - Satisfaction Scores were slightly and significantly higher at E sites (they think this is related to staff knowledge that they will be participating in project) **Baseline and Treatment-Phase Comparisons:** - A 2 by 2 factorial ANOVA performed on Quiz scores found significant interaction between study phase and site type, and post hoc tests confirmed the interaction was caused by improvement of Quiz scores among Es. - Same analysis on Satisfaction Scores found no differences or interactions, both Es and Cs had slightly lower scores at treatment than baseline. **Treatment-Phase Comparisons:** - Patients at E sites were more likely to have stayed with their original (that is, same as at index visit) birth control method than Cs. - Differences at 6 month visit were more likely to be statistically significant than at 12 month; differences were attributable to patients whose index visit was their initial visit as opposed to annual. - When looking at patients who used **any** method, Es were more likely than Cs to be using any method, although differences were statistically significant only at 6 month follow-up. - At 6 month visit, Es reported significantly greater ease in coping with method related problems; at 12 month group differences diminished. - They also compared patients who continued to use their method despite reporting problems; they found that at 6 and 12 month visits, Es were much more likely (significantly) to continue despite problems. - They calculated pregnancy rates two ways: one was the % of pregnancies with the denominator being those patients who had follow-up data (73% of the original sample), and the other has the denominator as the total original sample. For both rates, rates for Es were always lower than Cs, although only some differences were significant: when broken out by initial vs. annual visit, none were significant; when broken out by <=15 vs. 16-17, the <=15 group had no significant differences, while the 16-17 year olds had significantly higher pregnancy rates among Cs when calculated in either manner described above. When all patients were considered (in the numerator), the difference was significant if the denominator was continuing patients, and marginally significant ($p<.10$) if the denominator was all patients. - All patients scored very high on the Quiz at the index visit; even so, they found Es to be significantly higher than Cs at both administrations during treatment phase. - Patient continuation rates were compared between Es and Cs to ensure that there was not an effect related to selection of who continues. Continuation rates were equivalent at E and C sites (see note in weaknesses section). - There were no significant E/C differences in Satisfaction scores, although Es were generally slightly higher than Cs (authors believe this may be a ceiling effect, scores were very high at baseline).
Special Comments/Notes	- The authors seemed to downplay the pregnancy rate findings, saying subgroup differences did not usually attain significance. I would not downplay these findings; additionally I would note (which they did not) the significant findings by age group, which may be (needs further analysis) an indication of the developmental appropriateness of their intervention. - Generally, this was a very good study, with a good evaluation and some solid findings of intervention success, although they did not (at least in these analyses) pinpoint what aspects of the intervention led to lower pregnancy rates and contraceptive use differences.

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Name of Program	Values and Choices
Reference(s)/ Citation(s)	Donahue, M.J. 1987. "Technical Report of the national demonstration project field test of human sexuality: Values and Choices". Minneapolis, MN: Search Institute.
Sponsorship	Not indicated
Description	
Location(s)	Five sites: Minneapolis, MN; Grand Rapids, MN; Detroit, MI; Denver, CO; and San Francisco Bay Area, CA; intended to be mix of urban, suburban and rural
Time Period of Evaluation	September 1985 to March 1986
Sample Size	Not given
Age/Grade	7th and 8th grades
Goals of the Intervention	- Decreasing intention to have sex "while I am a teenager" (abstinence) - "Strengthening values supporting sexual restraint in adolescence" - Increasing parent-child communication about sexuality
Approach	- Short-term intervention (15 class sessions); not clear how often - Based on teaching 7 values: equality, honesty, respect, responsibility, promise-keeping, self-control, and social justice - Also teaches some basic knowledge, e.g. that sex can lead to pregnancy and STD's (surprising lack of knowledge around these in their baseline) - Based on Theory of Reasoned Action: that values affect behavioral intention, which affects behavior - Course involves parents, and is video-assisted. Parents participate in 3 parent-only sessions, view videotapes, meet teacher, etc; parents have some sense of ownership of program
Evaluation	
Evaluation Strategy	- Program followed by immediate post-test and 3 to 4 month post-test - Experimental and comparison groups are chosen from each school (i.e. comparison students attend school with experimental students)

Analytic Strategy/ Statistical Methods	**Theoretical Model:** Based on Theory of Reasoned Action, says that people do things because they intend to do them; in turn, such **behavioral intentions (BI)** are based on four components: beliefs about outcomes of actions (b); evaluations of those outcomes (e); perceptions of opinions of others about the act (p); and motivation to comply with opinions of others (m). - Their model in mathematical terms is: Aact (attitude toward the act) = $\Sigma(b_i * e_i)$; SN (subjective norms) = $\Sigma (p_i * m_i)$; $BI = {}_{w1}Aact + {}_{w2}SN + {}_{w3}V$ (where V=values in sexual decision-making, w1, w2 and w3 are empirically derived regression weights). - Used multivariate analysis of variance using SAS general linear models procedure (PROC GLM); gender, race and sexual experience (virgin/nonvirgin) were independent variables; family income, parental education and student's educational aspirations were covariates, they tested the effects of these as moderator variables, and tested effects of the course. - Used hierarchical model testing, starting with main effects only, and then 2nd and higher order interactions with covariates.
Methodological Weaknesses	- As the author mentions, when comparisons and experimentals are in the same setting (i.e. school), there may be a spillover effect; the Es may be sharing what they learn with the Cs (he calls it the lunchroom effect). - They had a high attrition rate from pre- to delayed post-test; their final analysis was based only on those who had completed all three surveys, and this was 40% of those who filled out pre-test. Without any Ns anywhere in the report, it is unclear how serious this problem was. They also did not indicate if the attrition problem was evenly distributed between Es and Cs.
Peer-reviewed?	No
Results Process Evaluations Associations Impacts	- Found very few interaction effects, almost only main effects. - **Attitude toward sexual restraint in adolescence** as dependent: found significant differences between comparison (Cs) and experimental (Es) groups at immediate posttest (Es were more likely to favor restraint), none at delayed post. - **Beliefs concerning male sex drive** (such as "it's harder for a boy to stop once he's been turned on..."): Overall course effects significant at both post and delayed post, Es less likely to believe statements like this; also found race interaction, whites less likely than blacks to have belief in male sex drive. - **Sexual Knowledge Test**: Significant effects for Es at post, none at delayed post; they believe that spillover of knowledge to comparisons occurred (or just maturation), since the Cs knowledge increased and closed the gap by delayed post. - **Frequency of conversations with parents concerning sexuality**: Significant increase for Es at post, but none at delayed post. - **Rejection of Sexual Coercion** (e.g. "It is sometimes all right to force a girlfriend or boyfriend to have sex", reverse coded): Significant effects for Es at post only, not at delayed post. - **Behavioral Intention to engage in intercourse**: Significant group differences at post only (Es less likely to intend to have sex as teenager, before marriage, etc), not significant at delayed post test. - **Attitude toward sexuality** (according to author, this was included to insure that the course did not contribute to a negative or repressed attitude toward sexuality): the course had no significant effect on this measure. - They also hypothesized that course effects would be greater for students whose parents participated in the parent sessions. Hypothesis was mostly refuted, except some evidence that students whose parents participated were more likely to retain knowledge gains at delayed posttest than Es whose parents didn't participate.

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Special Comments/Notes	- The author says that one possible reason for few findings of course effects at the delayed post-test may be that some of the measures may change as a natural part of maturation. For example, teens in general become more knowledgeable about sexuality as they get older. He says that this maturation effect in the comparison group may weaken apparent effects of the course on the treatment group. But the appropriate test of a course should be how much effect it has **above and beyond** any natural effects of maturation. - Main critique of this study: they look at intention, attitude and knowledge change only, not behavioral change.

Name of Program	Youth Incentive Entitlement Pilot Project (YIEPP)
Reference/citation	Olsen and Farkas. (1990). The effect of economic opportunity and family background on adolescent cohabitation and childbearing among low-income blacks. *Journal of Labor Economics*, 8:341-362.
Description	
Location	Program sites: Denver, Cincinnati, Baltimore, and certain rural Mississippi counties; Matched Controls: Phoenix, Louisville, Cleveland, and other rural Mississippi counties
Time Period of Evaluation	1978 to 1981
Sample Size	7,510 households containing YIEPP-eligible youth. Analyses are based on 2,387 Black adolescent females.
Age/Grade	10 to ?
Goals of the Intervention	To provide subsidized employment and training to improve employment and schooling outcomes and to provide employment opportunity to decrease childbearing, particularly out-of-wedlock.
Approach	Offered a part-time job during the school year, and full-time job during summer, both at minimum wage to youth from low-income households who had not yet graduated from high school and were enrolled in school.
Evaluation	
Evaluation Strategy	Quasi-experimental; between 1978 and 1980, more than 80,000 youths were provided YIEPP jobs at 17 program sites. In each of the 4 study areas and their matched comparisons a probability sample of more than 120,000 households were initially canvassed in the spring of 1978. In-person interviews were administered to youth and one of their parents in four waves conducted in the fall of 1978, 1979, 1980, and 1981.
Analytic Method	Hazards models and fixed effects models; only analyzed blacks in the sample (70% of total sample)
Weaknesses	- Not nationally representative sample. - Didn't control for variables which might mediate the relationship between employment opportunity and marriage/cohabitation/nonmarital birth.
Results	- Girls whose mother delayed her childbearing, whose mothers have more education, whose natural father was in the family unit, and those who live in an area with a higher employment rate for blacks were more likely to cohabit or marry during the observation period; presence of grandfather in the household was negatively related to cohabitation or marriage. - Greater employment opportunity had a strong negative effect on nonmarital childbearing, controlling for age.

Peer Reviewed?	Yes
Comments/Notes	- Should cohabitation and marriage be lumped together?